CAREER& TECHNOLOGY STUDIES

PROGRAM OF STUDIES

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CAREER AND TECHNOLOGY STUDIES

A. PROGRAM PHILOSOPHY/RATIONALE

Through Career and Technology Studies (CTS), secondary education in Alberta is responding to the many challenges of modern society, helping young people develop daily living skills, and nurturing a flexible, well-qualified work force.

In Canada's information society, characterized by rapid change in the social and economic environment, students must be confident in their ability to respond to change and successfully meet the challenges they face in their own personal and work lives. In particular, they must make decisions about what they will do when they finish high school. Many students will enter the work force, others will continue their education. All students face the challenges of growing independence and responsibility, and of entering the highly competitive workplace and/or post-secondary programs.

Secondary schools also face challenges. They must deliver, on a consistent basis, high quality, cost-effective programs that students, parents and community find credible and relevant.

CTS helps schools and students meet these challenges. Schools can respond more efficiently and effectively to student and community needs and expectations by using the opportunities in the CTS curriculum to design courses and access school, community and distance learning resources. Students can develop the confidence they need as they move into adult roles by assuming increased responsibility for their learning; cultivating their individual talents, interests and abilities; and defining and acting on their goals.

As an important component of basic education in Alberta secondary schools, CTS promotes students' achievement by setting clear expectations and recognizing students' success. Students in CTS develop competencies—that is, the knowledge, skills and attitudes students must demonstrate, or what they know and can do.

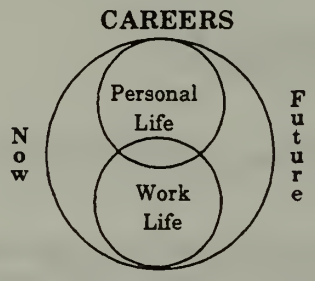
These competencies can be applied now and in the future as students make a smooth transition into adult roles in the family, community, workplace and/or further education. To help ensure this transition for students, clearly stated expectations and standards have been defined with the assistance of teachers, business and industry representatives and post-secondary educators.

CTS offers *all* students important learning opportunities. Regardless of the particular area of study chosen, students in CTS will:

- develop skills that they can apply in their daily lives now and in the future
- refine career-planning skills
- develop technology-related skills
- enhance employability skills
- apply and reinforce learnings developed in other subject areas.

In CTS, students build skills they can apply in their everyday lives. For example, in the CTS program, particularly at the introductory levels, students have the opportunity to improve their ability to make sound consumer decisions, and to appreciate environmental and safety precautions.

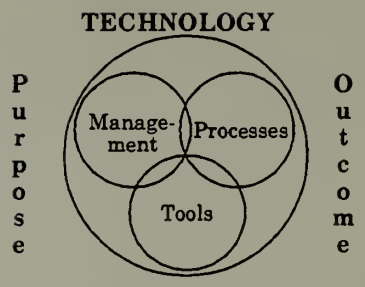
A career encompasses more than activities related to a person's job or occupation; it involves one's personal life in both local and global contexts; e.g., as a family member, a friend, a community volunteer, a citizen.



The integration of careers throughout the CTS program helps students make effective career decisions and target their efforts. Students in CTS will have the opportunity to expand their knowledge about careers, occupations and job opportunities and the education and/or training requirements involved. As well, they will recognize the need for lifelong learning.

Students in CTS will have the opportunity to use and apply technology and systems effectively and efficiently, which involves:

- a decision regarding which processes and procedures best suit the task at hand
- the appropriate selection and skilled use of the tools or resources that are available
- an assessment of and management of the impact the use of the technology may have on themselves, on others and on the environment.



Integrated throughout CTS are employability skills, those basic competencies that help students develop their personal management and social skills. Personal management skills are improved as students take increased responsibility for their learning, design innovative solutions to problems or challenges, and manage resources effectively and efficiently. Students' social skills improve through learning experiences that require them to work effectively with others, demonstrate teamwork and leadership, and maintain high standards in safety and accountability.

Further enhancing the employability skills, CTS reinforces and enhances learnings developed in core and other complementary courses. The curriculum emphasizes, as appropriate, the effective application of communication and numeracy skills.

Finally, in addition to the common outcomes described above, those students who focus on a particular area of study will develop career-specific competencies that support entry into the workplace and/or related post-secondary programs. Career-specific competencies can involve understanding and applying appropriate terminology, processes and technologies related to a specific career, occupation or job.

B. GENERAL LEARNER EXPECTATIONS

General learner expectations describe the basic competencies that are integrated throughout the CTS program.

Within an applied context that is relevant to personal goals, aptitudes and abilities, the student in Career and Technology Studies will:

- demonstrate the basic knowledge, skills and attitudes necessary for achievement and fulfillment in personal life
- develop an action plan that relates personal interests, abilities and aptitudes to career opportunities and requirements
- use technology effectively, linking and applying available tools, management and processes to produce a desired outcome
- develop personal management skills by:
  - linking theory and practice, using resources, tools, technology and processes responsibly and efficiently (managing learning)
  - applying effective and innovative decision-making and problem-solving strategies in the design, production, marketing and consumption of goods and services (being innovative)
  - selecting relevant, goal-related activities, ranking them in order of importance, allocating necessary time, and preparing and following schedules (managing resources)
- improve social interaction skills by:
  - demonstrating flexibility and cooperative work and communication behaviors (working with others)
  - participating as a team member by working cooperatively with others and contributing to the group with ideas, suggestions and effort (teamwork and leadership)
  - demonstrating high standards of diligence, attendance and punctuality, following safe procedures consistently, and recognizing and eliminating potential hazards (demonstrating responsibility)
- demonstrate appropriate verbal, written, composition, summarization and presentation skills
- use basic computation and measurement principles accurately and efficiently.

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C. PROGRAM ORGANIZATION

CURRICULUM STRUCTURE

Career and Technology Studies is organized into *strands* and *modules.*

Strands in CTS define competencies that help students:

- build daily living skills
- investigate career options
- use technology (managing, processes, tools) effectively and efficiently
- prepare for entry into the workplace and/or related post-secondary programs.

In general, strands relate to selected industry sectors that offer positive occupational opportunities for students. Some occupational opportunities require further education after high school, and some allow direct entry into the workplace. The industry sectors encompass both goods-producing industries, such as agriculture, manufacturing and construction, and service-producing industries, such as business services, health services, and finance and insurance services.

Modules are the building blocks for each strand. They define what a student is expected to know and be able to do (exit-level *competencies*). Modules also specify prerequisites and facility and instructional parameters, where necessary.

The competencies a student must demonstrate to achieve success in a module are defined through the *module learner expectations.* Senior high school students who can demonstrate the module learner expectations (i.e., have the designated competencies) will qualify for one credit towards their high school diploma.

Module learner expectations are a culmination of the *specific learner expectations*, which provide a more detailed framework for instruction. They define the scope and depth of knowledge, skills and attitudes the student should acquire.

The following chart shows the 21 strands that comprise the CTS program and the number of modules available in each strand.

Strand	No. of Modules
1. Agriculture	31
2. Career Transitions	13
3. Communication Technology	32
4. *Community Health*	*25**
5. Construction Technologies	46
6. *Cosmetology*	*64**
7. Design Studies	31
8. *Electro-Technologies*	*33**
9. *Energy and Mines*	*27**
10. Enterprise and Innovation	8
11. *Fabrication Studies*	*39**
12. *Fashion Studies*	*37**
13. Financial Management	15
14. Foods	37
15. Forestry	21
16. Information Processing	43
17. Legal Studies	13
18. *Management and Marketing*	*26**
19. *Mechanics*	*49**
20. Tourism Studies	24
21. Wildlife	17

*Estimate

Note: *As of September 1994, 13 of the 21 strands are available for optional implementation in Alberta junior and high schools. The remaining strands, indicated above in italics, will be phased in from September 1995 to September 1996. Provincial implementation of all strands is scheduled for September 1997.*

LEVELS OF ACHIEVEMENT

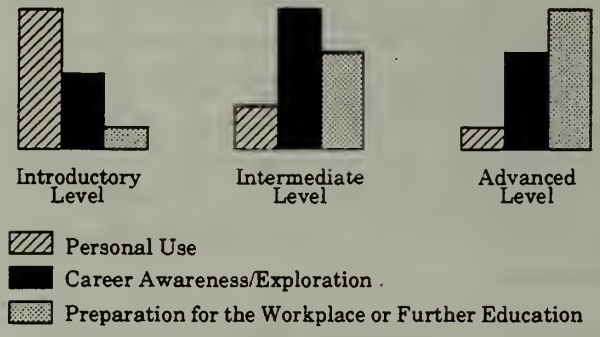
Modules are organized into three levels of achievement: introductory, intermediate and advanced. As students progress through the levels, they will be expected to meet higher standards and demonstrate increased degree of competence, both in the general learner expectations and the module learner expectations.

Introductory level modules help students build daily living skills and form the basis for further learning. Introductory modules are developed for students who have no previous experience in the strand.

Intermediate level modules build on the competencies developed at the introductory level. They provide a broader perspective, helping students recognize the wide range of related career opportunities available within the strand.

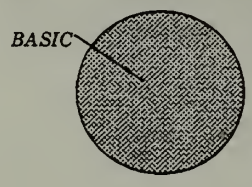
Advanced level modules demand a higher level of expertise and help prepare students for entry into the workplace or a related post-secondary program.

The following illustrates the relative emphasis on the aspects of career planning at each of the levels.



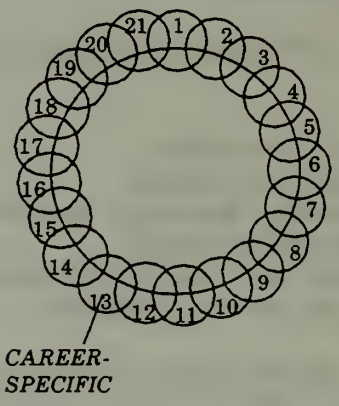
TYPES OF COMPETENCE

Two types of competence are defined within the CTS program: basic and career-specific.



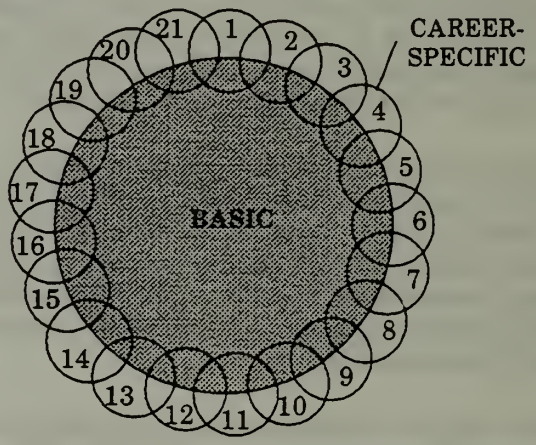
Basic Competencies are generic to any career area and are developed within each module. Basic competencies include:

- personal management; e.g., managing learning, being innovative, ethics, managing resources
- social; e.g., communication, teamwork, leadership and service, and demonstrating responsibility (safety and accountability).



Career-specific Competencies relate to a particular strand. These competencies build daily living skills at the introductory levels and support the smooth transition to the workplace and/or post-secondary programs at the intermediate and advanced levels.

The following model shows the relationship of these two types of competencies within the 21 strands of CTS (numbers refer to the chart on page A.5):



BASIC COMPETENCIES

The following basic competencies (KSA) are integrated throughout the CTS program. A student's performance and growth should be assessed through observations involving the student, the teacher, peers and others. As the student progresses through the levels, he or she builds on competencies gained in earlier levels.

	Basic Competency	Stage 1	Stage 2	Stage 3
Personal Management		*The student will:*	*The student will:*	*The student will:*
	Managing Learning	☐ be able to identify/locate appropriate reference/ information sources ☐ identify and demonstrate a variety of learning skills and tools; e.g., learning styles/ preferences and strategies such as notemaking, concept mapping, etc.	☐ apply a variety of learning styles/preferences to enhance ability to acquire new information recall and apply knowledge	☐ draw and defend conclusions from available information ☐ extract rules or principles ☐ apply rules and principles to new situations
	Being Innovative	☐ recognize opportunities and problems ☐ specify goals and constraints ☐ generate alternatives ☐ consider risks ☐ evaluate and select best alternative	☐ think critically and act logically to evaluate situations, solve problems and make decisions	☐ combine ideas or information in new ways ☐ make connections between seemingly unrelated ideas ☐ prepare, validate and implement plans that reveal new possibilities
	Ethics	☐ identify appropriate ethical behaviour	☐ demonstrate appropriate ethical behaviour	☐ encourage and support others to demonstrate ethical behaviour
	Managing Resources	☐ allocate time effectively by selecting relevant, goal-related activities, ranking them in order of importance, allocating time, and preparing and following schedules.	☐ allocate materials and use facilities effectively by acquiring, storing, and distributing materials, supplies, parts, equipment, space, or final products in order to make best use of them.	☐ allocate human and other resources effectively by assessing knowledge and skills, distributing work and materials, evaluating performance and providing feedback.
Social Interactions	Communication	☐ prepare and effectively present accurate, concise written, visual and oral reports	☐ communicate thoughts, feelings, and ideas to justify or challenge a position by encouraging, persuading, convincing or otherwise motivating individuals or groups	☐ negotiate effectively by working towards an agreement that may involve exchanging specific resources or resolving divergent interests
	Teamwork, Leadership and Service	☐ participate as an effective member of a team by working cooperatively with others and contributing ideas, suggestions and effort ☐ recognize and respect peoples' diversity and individual differences	☐ serve clients and customers effectively by listening carefully to understand their needs and by providing as much assistance as possible to satisfy their expectations	☐ lead when appropriate, mobilizing the group for high performance
	Demonstrating Responsibility (Safety and Accountability)	☐ demonstrate high standards in attendance and punctuality ☐ be trustworthy and honest in dealing with others ☐ follow safe procedures consistently and recognize and eliminate potential hazards.	☐ understand and evaluate the impact on self and the organization for breaking with organizational or societal values and regulations.	☐ work hard to excel at setting and meeting goals, doing tasks, setting high standards and paying attention to important details.

D. CURRICULUM AND ASSESSMENT STANDARDS

DEFINITIONS

Curriculum standards in CTS define what students must know and be able do. Curriculum standards are expressed through general learner expectations for CTS, and through module and specific learner expectations for each strand.

Assessment standards define how the student's performance will be judged. In CTS, each assessment standard defines the conditions and criteria to be used for assessing the competencies defined in each module learner expectation. Students must fully meet each assessment standard, including all of the criteria and conditions defined for the module. Assessment standards are in draft form, as are tools and weightings, and will be validated 1994–97.

Teachers throughout the province will be able to ensure students receive a fair and reliable assessment. Students will use the assessment standards to guide their efforts, ensuring they participate more effectively and successfully in the learning and assessment process. Standards at advanced levels are as much as possible linked to workplace and post-secondary entry-level requirements.

STRAND CURRICULUM STANDARDS

The following pages describe the rationale, organization, scope and sequence, and module learner expectations for the following strands in the Career and Technology Studies program:

- Agriculture (1994)
- Career Transitions (1994)
- Communication Technology (1994)
- Construction Technologies (1994)
- Design Studies (1994)
- Enterprise and Innovation (1992)
- Financial Management (1994)
- Foods (1994)
- Forestry (1994)
- Information Processing (1994)
- Legal Studies
- Tourism Studies (1993)
- Wildlife (1994).

AGRICULTURE

STRAND RATIONALE

Agriculture is a diverse endeavour involving both rural and urban communities. It affects the quality of life enjoyed by all Albertans. Agriculture encompasses not only the direct production of primary goods, but also processing and service industries. It is the second most important area of economic activity in Alberta.★

Growth and development opportunities exist for agriculture products and technologies. The continued strength of our agriculture industry in domestic and international markets can be ensured through practices that add value to agricultural commodities, and by diversifying products and services to meet consumer needs.

Agriculture involves the use of our most basic resources: soils, water, plants, animals and people. Concern for the environment provides continuing incentive for new technologies and methods of managing interactions among these resources. Industry practices must ensure sustainable use of our natural resource base.

Agriculture, a strand in Career and Technology Studies, provides a comprehensive view of agriculture in Alberta. It encompasses plant and animal production, interior and exterior plantscape, animal husbandry, the agrifood industry, market research and development, and environmental management. Students will develop first-hand knowledge of practices within Alberta's agriculture industries, and apply knowledge gained in producing agricultural products and providing related services.

Within the philosophy of Career and Technology Studies, students in Agriculture will develop the knowledge, skills, attitudes, motivation and commitment to work individually and collectively, as private citizens and members of the work force, toward the conservation and responsible use of water, land, air, forests and wildlife. In order to achieve these competencies, *the student will:*

- develop greater awareness of the economic, environmental and social significance of agriculture in society and the global marketplace, and of factors affecting industry decisions
- describe the characteristics of Alberta's agriculture and horticulture industries, and identify resulting products and services
- describe technologies and research programs designed to enhance development of a range of products and services and achieve sustainable use of natural resources

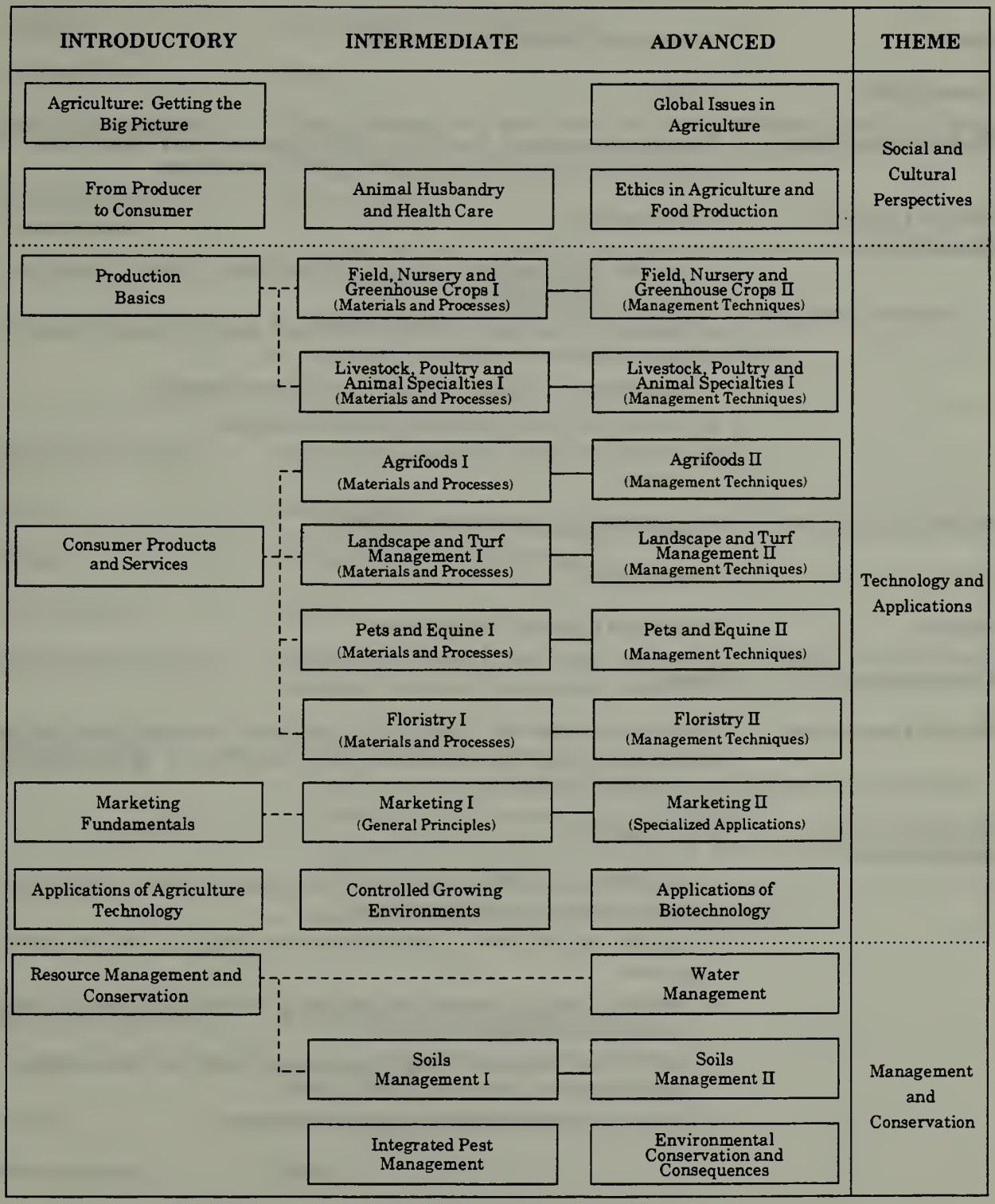
★Alberta Agriculture, Food and Rural Development. *Agriculture in Alberta.* Edmonton, Alberta: Alberta Agriculture, Food and Rural Development, 1993.

- translate development and conservation goals into viable plans for developing and marketing agricultural and horticultural products and services

- develop competencies and behaviours that have broad application to environmental career paths, and specific application to careers within Alberta's agriculture and horticulture industries.

Although students are at various stages of cognitive development, many will continue to use concrete operational thinking. Each module in Agriculture provides opportunities for students to link concrete and psychomotor learning experiences to more abstract thought processes and levels of thinking. Students will be encouraged to transfer the competencies they have developed in other core and complementary school courses as well as through hobbies, interests and past experiences. As students learn to relate theory and practice in participatory situations, confidence will further their ability to meet personal and professional challenges.

SCOPE AND SEQUENCE — AGRICULTURE



—— Prerequisite - - - - Recommended prerequisite or corequisite

MODULE AGR101: **AGRICULTURE: GETTING THE BIG PICTURE**

Level: **Introductory**

Theme: **Social and Cultural Perspectives**

Prerequisite: **None**

Module Description: Students demonstrate knowledge of the diversity and significance of agriculture, and identify career paths within the industry.

Module Learner Expectations:

The student will:

- describe the diversity of agricultural activity in Alberta, Canada and the global community
- explain the economic, environmental and social and significance of agriculture
- research career clusters within the agriculture industry
- demonstrate effort to develop basic competencies.

MODULE AGR102: **FROM PRODUCER TO CONSUMER**

Level: **Introductory**

Theme: **Social and Cultural Perspectives**

Prerequisite: **None**

Module Description: Students research and describe the range of activities involved in producing, processing, transporting and marketing an agricultural or horticultural product.

Module Learner Expectations:

The student will:

- identify factors that influence enterprise selection within an agriculture or horticulture industry
- describe the sequence of steps required to produce a plant or animal product
- research potential markets and marketing systems for an agricultural or horticultural product or service
- explain how consumer markets are expanded and an existing product is altered to meet the needs of new markets.
- demonstrate effort to develop basic competencies.

MODULE AGR103: PRODUCTION BASICS

Level: Introductory

Theme: Technology and Applications

Prerequisite: None

Module Description: Students demonstrate basic steps involved in growing a plant or raising an animal commodity, and identify related career paths.

Module Learner Expectations:

The student will:

- explain the basic steps and procedures involved in growing a plant or raising an animal commodity
- research career clusters in agricultural or horticultural production
- demonstrate effort to develop basic competencies.

MODULE AGR106: CONSUMER PRODUCTS AND SERVICES

Level: Introductory

Theme: Technology and Applications

Prerequisite: None

Module Description: Students demonstrate basic steps involved in developing an agriculture product or providing a related service, and identify related career paths.

Module Learner Expectations:

The student will:

- explain the basic steps and procedures involved in developing a consumer product or providing a related service
- research career clusters in developing agricultural or horticultural products or providing related services
- demonstrate effort to develop basic competencies.

MODULE AGR109: MARKETING FUNDAMENTALS

Level: Introductory

Theme: Technology and Applications

Prerequisite: None

Module Description: Students explain basic principles involved in marketing a plant or animal product or service, and identify related career paths.

Module Learner Expectations:

The student will:

- explain basic principles involved in marketing an agriculture/ horticulture product or service
- research career clusters related to marketing an agricultural/ horticultural product or service
- demonstrate effort to develop basic competencies.

MODULE AGR110: APPLICATIONS OF AGRICULTURE TECHNOLOGY

Level: **Introductory**

Theme: **Technology and Applications**

Prerequisite: **None**

Module Description: Students describe applications of research and technology within an agriculture or horticulture industry.

Module Learner Expectations:

The student will:

- explain how research and technology influence the development of agricultural products and services
- research specific applications of technology in agriculture production, processing or marketing
- design a simple technology that addresses a current need in agriculture
- demonstrate effort to develop basic competencies.

MODULE AGR111: RESOURCE MANAGEMENT AND CONSERVATION

Level: **Introductory**

Theme: **Management and Conservation**

Prerequisite: **None**

Module Description: Students describe practices used to manage water, soil and land use, and present the results of research on one or more related issues in agriculture.

Module Learner Expectations:

The student will:

- describe the nature and extent of Alberta's water resource, and practices for managing its use
- describe the nature and characteristics of soil in Alberta, and practices for managing its use

- examine different uses of land in rural and urban Alberta, and factors upon which land-use decisions are made
- present the results of research on one or more issues involving water, soil or land use in agriculture
- demonstrate effort to develop basic competencies.

MODULE AGR202: **ANIMAL HUSBANDRY AND HEALTH CARE**

Level: **Intermediate**

Theme: **Social and Cultural Perspectives**

Prerequisite: **None**

Module Description: Students apply principles of animal science and health technology in providing care for a domestic animal.

Module Learner Expectations: *The student will*:

- describe characteristics of a healthy animal and factors that contribute to a healthy animal environment
- employ appropriate techniques and technologies in providing care for a domestic animal
- propose a rationale and strategy for addressing animal welfare
- demonstrate effort to improve basic competencies.

MODULE AGR203: **FIELD, NURSERY AND GREENHOUSE CROPS I**

Level: **Intermediate**

Theme: **Technology and Applications**

Recommended Prerequisite: **Production Basics (AGR103)**

Module Description: Students apply knowledge of materials and processes in growing a field, nursery or greenhouse crop, focusing attention on plant anatomy and identification, growth requirements, physical structures and equipment, and related career opportunities.

Module Learner Expectations: *The student will*:

- apply knowledge of plant anatomy and identification to field, nursery or greenhouse plants
- demonstrate practical skills in growing a field, nursery or greenhouse crop
- describe structures and equipment used in crop production
- research career clusters related to field, nursery or greenhouse crop production
- demonstrate effort to improve basic competencies.

MODULE AGR204: **LIVESTOCK, POULTRY AND ANIMAL SPECIALITIES I**

Level: **Intermediate**

Theme: **Technology and Applications**

Recommended Prerequisite: **Production Basics (AGR103)**

Module Description: Students apply knowledge of materials and processes in raising livestock, poultry or other animal commodities, focusing attention on anatomy and identification, health and nutrition, physical structures and equipment, and related career opportunities.

Module Learner Expectations: *The student will:*

- apply knowledge of anatomy and identification to beef, dairy, sheep, swine, poultry or speciality animals
- demonstrate practical skills in raising beef, dairy, sheep, swine, poultry or specialty animals
- describe structures and equipment used in animal production
- research career clusters related to beef, dairy, sheep, swine, poultry or specialty production
- demonstrate effort to improve basic competencies.

MODULE AGR205: **AGRIFOODS I**

Level: **Intermediate**

Theme: **Technology and Applications**

Recommended Prerequisite: **Consumer Products and Services (AGR106)**

Module Description: Students demonstrate knowledge of materials and processes used in producing an agrifood product or providing a related service, focusing attention on industry inputs, processing technologies and practices, and related career opportunities.

Module Learner Expectations: *The student will:*

- describe the range of input materials, food products and/or related services characteristic of an agrifood industry
- explain technologies and practices used in processing an agricultural food product or providing a related service
- research career clusters within an agrifood industry
- demonstrate effort to improve basic competencies.

MODULE AGR206: **LANDSCAPE AND TURF MANAGEMENT I**

Level: **Intermediate**

Theme: **Technology and Applications**

Recommended Prerequisite: **Consumer Products and Services (AGR106)**

Module Description: Students demonstrate knowledge of materials and processes used to provide landscape and turf management services, focusing attention on plant identification, equipment and supplies, basic landscape maintenance and related career opportunities.

Module Learner Expectations: *The student will:*

- identify plants suitable for use in Alberta landscapes
- identify and describe equipment and materials commonly used in landscape practices
- demonstrate practical skills used to maintain landscape plants and turfgrasses
- research career clusters related to landscape and turf management
- demonstrate effort to improve basic competencies.

MODULE AGR207: **PETS AND EQUINE I**

Level: **Intermediate**

Theme: **Technology and Applications**

Recommended Prerequisite: **Consumer Products and Services (AGR106)**

Module Description: Students demonstrate practical skills and approved practices in providing care for a domestic animal for purpose of pleasure, performance or companionship. The module focuses attention on anatomy, taxonomy and genetics, handling and care techniques, health and nutrition, and related career opportunities.

Module Learner Expectations: *The student will:*

- describe the importance, origin and anatomy of a domestic animal
- apply knowledge of taxonomy and genetics in identifying the types, breeds and characteristics of a domestic animal
- demonstrate practical skills and approved procedures for animal handling and animal health care
- research career clusters that involve providing care for domestic animals
- demonstrate effort to improve basic competencies.

MODULE AGR208: **FLORISTRY I**

Level: **Intermediate**

Theme: **Technology and Applications**

Recommended Prerequisite: **Consumer Products and Services (AGR106)**

Module Description: Students demonstrate knowledge of materials and processes used to construct floral designs and interior plantscapes, focusing on plant and flower identification, simple floral arrangements and indoor plantscapes, and related career opportunities.

Module Learner Expectations: *The student will:*

- identify and explain the cultural requirements of indoor plants, cut flowers and foliage
- design and construct simple floral arrangements
- design and construct simple indoor plantscapes
- research career clusters related to floristry and interior plantscapes
- demonstrate effort to improve basic competencies.

MODULE AGR209: **MARKETING I**

Level: **Intermediate**

Theme: **Technology and Applications**

Recommended Prerequisite: **Marketing Fundamentals (AGR109)**

Module Description: Students apply knowledge of general marketing principles within the context of an agriculture or horticulture industry, focusing attention on materials and services offered to the consumer, marketing techniques and related career opportunities.

Module Learner Expectations: *The student will:*

- describe the general function and characteristics of marketing within an agriculture or horticulture industry
- explain current changes and resulting opportunities in domestic and international markets
- research career clusters and the range of employment opportunities in marketing a commodity, product or service
- demonstrate effort to improve basic competencies.

MODULE AGR210: **CONTROLLED GROWING ENVIRONMENTS**

Level: **Intermediate**

Theme: **Technology and Applications**

Prerequisite: **None**

Module Description: Students identify essential components of a controlled growing environment, and demonstrate techniques used to manage the growing environment within a protected structure.

Module Learner Expectations:

The student will:

- identify and explain essential components of controlled growing environments
- suggest ways in which controlled growing environments can be adapted for crop production or confinement livestock housing
- demonstrate techniques used to regulate and manage growing environments within a protected structure
- demonstrate effort to improve basic competencies.

MODULE AGR212: **SOILS MANAGEMENT I**

Level: **Intermediate**

Theme: **Management and Conservation**

Recommended Pre-requisite/Corequisite: **Resource Management and Conservation (AGR111)**

Module Description: Students examine soil formation and classification, conduct tests to determine the physical and chemical properties of soils, and explain the impact of soil properties on productivity.

Module Learner Expectations:

The student will:

- describe the origin and composition of soils in western Canada
- identify physical properties of soil and describe their relationship to soil productivity
- identify chemical properties of soil and describe their relationship to soil productivity
- demonstrate effort to improve basic competencies.

MODULE AGR213: **INTEGRATED PEST MANAGEMENT**

Level: **Intermediate**

Theme: **Management and Conservation**

Prerequisite: **None**

Module Description: Students apply knowledge of biological, cultural and chemical pest-control measures within the context of an agriculture, horticulture or forest industry.

Module Learner Expectations: *The student will:*

- describe the life cycle and ecology of major groups of pests
- describe and assess biological, cultural and chemical strategies for pest control
- explain basic principles, strategies and benefits of integrated pest management
- develop practical procedures for pest management within an agriculture, horticulture or forest industry
- demonstrate effort to improve basic competencies.

MODULE AGR301: **GLOBAL ISSUES IN AGRICULTURE**

Level: **Advanced**

Theme: **Social and Cultural Perspectives**

Prerequisite: **None**

Module Description: Students analyze a range of issues in agriculture, and develop strategies for dealing with agriculture issues within a global context.

Module Learner Expectations: *The student will:*

- analyze a range of economic, environmental and social issues in agriculture
- compare issues that involve agriculture in Alberta and Canada to similar issues at a global level
- develop action plans that address a complex issue in agriculture
- demonstrate effort to refine basic competencies.

MODULE AGR302: ETHICS IN AGRICULTURE AND FOOD PRODUCTION

Level: **Advanced**

Theme: **Social and Cultural Perspectives**

Prerequisite: **None**

Module Description: Students identify a range of ethical concerns relevant to agriculture and food production, analyze different points of view regarding agriculture technologies, and clarify a personal position on an ethical issue in agriculture.

Module Learner Expectations:

The student will:

- identify a range of ethical concerns regarding current practices in agriculture
- analyze different points of view regarding a technology used in agriculture
- clarify a position on an ethical issue in agriculture
- demonstrate effort to refine basic competencies.

MODULE AGR303: FIELD, NURSERY AND GREENHOUSE CROPS II

Level: **Advanced**

Theme: **Technology and Applications**

Prerequisite: **Field, Nursery and Greenhouse Crops I (AGR203)**

Module Description: Students demonstrate techniques used to manage production of field, nursery or greenhouse crops, focusing attention on enterprise selection, taxonomy and genetics, production management and industry trends.

Module Learner Expectations:

The student will:

- assess opportunities for producing a field, nursery or greenhouse crop
- apply principles of taxonomy and genetics to field, nursery or greenhouse plants
- demonstrate practical skills in managing the production of a field, nursery or greenhouse crop
- research industry trends in field, nursery or greenhouse crop production
- demonstrate effort to refine basic competencies.

MODULE AGR304: **LIVESTOCK, POULTRY AND ANIMAL SPECIALTIES II**

Level: **Advanced**

Theme: **Technology and Applications**

Prerequisite: **Livestock, Poultry and Animal Specialties I (AGR204)**

Module Description: Students demonstrate techniques used to manage production of livestock, poultry or other animal commodities, focusing attention on enterprise selection, genetics and reproduction, production management and industry trends.

Module Learner Expectations: *The student will:*

- assess opportunities for producing beef, dairy, sheep, swine, poultry or specialty animals
- apply principles of genetics and reproduction to beef, dairy, sheep, swine, poultry or specialty animals
- demonstrate practical skills in managing the production of beef, dairy, sheep, swine, poultry or specialty animals
- research industry trends in beef, diary, sheep, swine, poultry or specialty production
- demonstrate effort to refine basic competencies.

MODULE AGR305: **AGRIFOODS II**

Level: **Advanced**

Theme: **Technology and Applications**

Prerequisite: **Agrifoods I (AGR205)**

Module Description: Students demonstrate knowledge of techniques used to manage the development of an agrifood product or related service, focusing attention on government regulation and control, economic principles, product quality and safety, environmental impact and industry trends.

Module Learner Expectations: *The student will:*

- identify government legislation and policies that regulate practices within an agrifood industry
- describe techniques used to manage industry practices, including the application of economic principles, product quality and safety, and sustainable use of natural resources
- research industry trends and opportunities for developing new agrifood products
- demonstrate effort to refine basic competencies.

MODULE AGR306: **LANDSCAPE AND TURF MANAGEMENT II**

Level: **Advanced**

Theme: **Technology and Applications**

Prerequisite: **Landscape and Turf Management I (AGR206)**

Module Description: Students demonstrate techniques used to manage landscape and turf management services, focusing attention on plant taxonomy, equipment maintenance, effective landscape practices, cost estimates and pricing.

Module Learner Expectations:

The student will:

- identify and classify plants suitable for use in Alberta landscapes
- perform daily maintenance and safety checks on equipment used in landscape practices
- demonstrate practical skills used to install and maintain landscape plants and turfgrasses
- apply knowledge of basic business principles to landscape and turf management services
- demonstrate effort to refine basic competencies.

MODULE AGR307: **PETS AND EQUINE II**

Level: **Advanced**

Theme: **Technology and Applications**

Prerequisite: **Pets and Equine I (AGR207)**

Module Description: Students demonstrate techniques used to manage an animal boarding or training facility, focusing attention on the care and use of physical facilities, husbandry and training skills, health and reproductive technologies, and record keeping systems.

Module Learner Expectations:

The student will:

- describe the maintenance and use of kennels, cages, stables or other confinement structures used in caring for domestic animals
- demonstrate practical skills and approved procedures for animal husbandry and training
- explain applications of health and reproductive technologies in providing animal care
- apply knowledge of appropriate techniques for managing an animal boarding or training facility
- demonstrate effort to refine basic competencies.

MODULE AGR308: **FLORISTRY II**

Level: **Advanced**

Theme: **Technology and Applications**

Prerequisite: **Floristry I (AGR208)**

Module Description: Students demonstrate knowledge of the practices involved in providing floral design and interior plantscape services, focusing attention on design elements, interior plant care, floral services and marketing practices.

Module Learner Expectations: *The student will:*

- design and construct fresh, dried and artificial floral arrangements
- demonstrate practical skills used to maintain indoor plantscapes
- explain techniques used to manage services and market products within a floral industry
- demonstrate effort to refine basic competencies.

MODULE AGR309: **MARKETING II**

Level: **Advanced**

Theme: **Technology and Applications**

Prerequisite: **Marketing I (AGR209)**

Module Description: Students explain specialized applications of marketing within an agriculture or horticulture industry, focusing attention on regulatory structures and policies that influence supply of a commodity, product or service.

Module Learner Expectations: *The student will:*

- describe past and present trends in the regulated marketing of an agricultural commodity, product or service
- research regulatory structures and policies that influence supply of the commodity, product or service
- explain factors that affect decisions to market the commodity, product or service
- demonstrate effort to refine basic competencies.

MODULE AGR310: **APPLICATIONS OF BIOTECHNOLOGY**

Level: **Advanced**

Theme: **Technology and Applications**

Prerequisite: **None**

Module Description: Students present the results of research on applications of biotechnology in agriculture and food production.

Module Learner Expectations: *The student will:*

- describe the history and development of biotechnology
- explain applications of biotechnology in agriculture and food production
- conduct research on a recent development in biotechnology
- demonstrate effort to refine basic competencies.

MODULE AGR311: **WATER MANAGEMENT**

Level: **Advanced**

Theme: **Management and Conservation**

Recommended Pre-requisite/Corequisite: **Resource Management and Conservation (AGR111)**

Module Description: Students explain principles of water management, and establish appropriate water management practices for an agriculture or horticulture enterprise.

Module Learner Expectations: *The student will:*

- describe the hydrologic cycle
- identify water sources and water quality factors important to agriculture
- explain how agriculture affects the water resource at local and global levels
- describe techniques used to manage water for the benefit of agriculture and the environment
- demonstrate effort to refine basic competencies.

MODULE AGR312: **SOILS MANAGEMENT II**

Level: **Advanced**

Theme: **Management and Conservation**

Prerequisite: **Soils Management I (AGR212)**

Module Description: Students demonstrate knowledge of appropriate soil testing and amending techniques, and interpret soil survey maps and reports.

Module Learner Expectations: *The student will*:

- analyze the nutrient requirements of plants and select appropriate fertilization techniques
- demonstrate appropriate soil sampling techniques and interpret soil test reports
- describe the legal location of a parcel of land using the Western Grid Survey System
- read and interpret soil survey maps and reports
- demonstrate effort to refine basic competencies.

MODULE AGR313: **ENVIRONMENTAL CONSERVATION AND CONSEQUENCES**

Level: **Advanced**

Theme: **Management and Conservation**

Prerequisite: **None**

Module Description: Students examine the impact of a range of plant and animal production practices on the environment, and propose strategies for ensuring the sustainable use of natural resources.

Module Learner Expectations: *The student will*:

- describe the structure and functioning of ecosystems
- explain potential impacts of a range of agricultural practices on environmental factors
- propose strategies for ensuring the sustainable use of natural resources
- demonstrate effort to refine basic competencies.

CAREER TRANSITIONS

STRAND RATIONALE

The Career Transitions strand focuses on helping students to see the relevance of schooling and to make a smooth transition from secondary school to the world of work or to further training and/or education.

Career Transitions has the potential to create some of the more meaningful educational experiences for today's high school students. It encourages integration across curricular areas and partnerships in which students, schools and businesses can work together toward common goals.

Each Career Transitions module encourages the development of independent thinking skills and decision making. As well, they encourage the abilities and flexibility required to adapt to new situations, including the pursuit of career advancement opportunities and changes in career paths. Career Transitions also helps students recognize the relevance, transferability and applicability of competencies they have developed in other courses and through hobbies, interests or work.

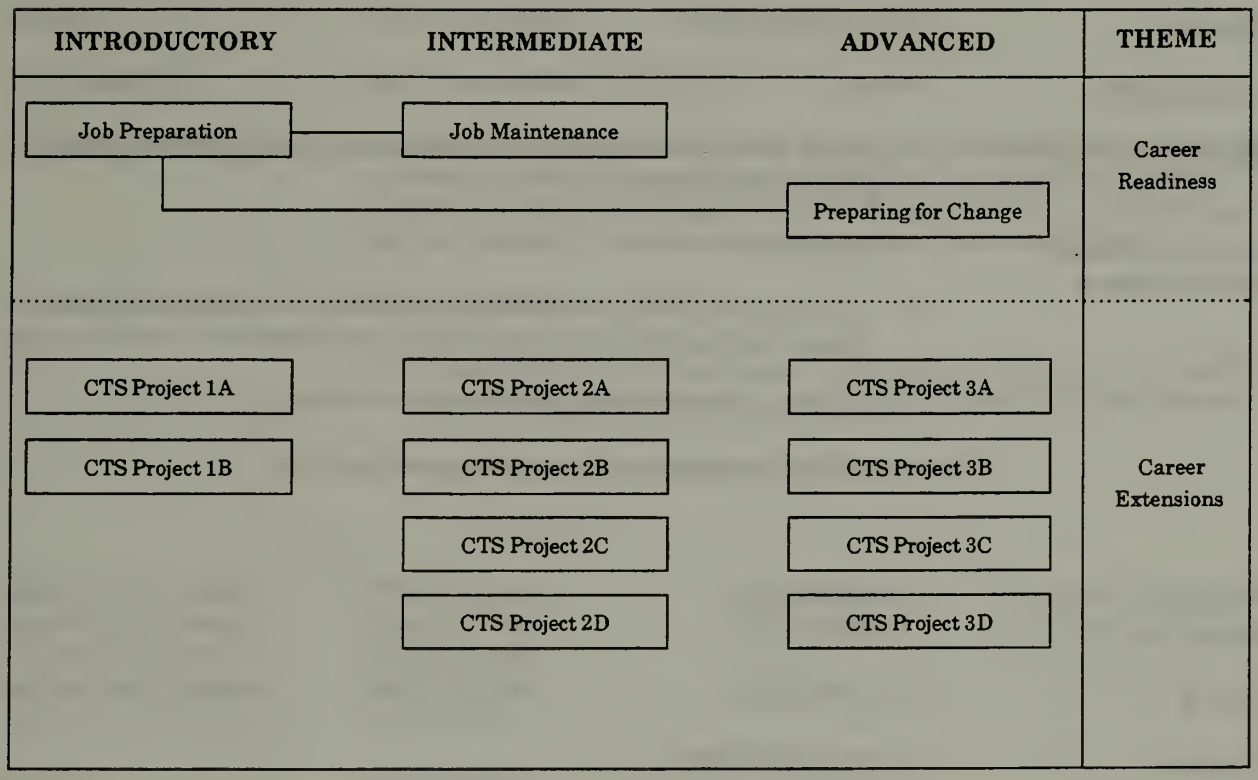
Students participating in Career Transitions are encouraged to set realistic career goals and to increase their motivation to succeed in courses that are related to their career goals. Career Transitions helps students determine what employers and others expect of prospective employees, and encourages students to actively work to meet their own and others' expectations. Contact with role models in the work setting can provide accurate information about the training and pre-training requirements of occupations and the availability and use of up-to-date technology.

Within the philosophy of CTS, students in Career Transitions *will:*

- analyze the job market and societal trends and relate them to personal career plans
- explore selected occupations in depth
- demonstrate successful job search, acquisition and maintenance skills
- understand the concept of job termination
- develop acceptable work habits and positive attitudes toward work
- identify and discuss the expectations, rights and responsibilities of employers and employees
- recognize and develop safe workplace practices
- identify and understand legislation and regulations that govern employers and employees
- understand the relationships between the individual worker, the employer, organized labour and the government

- explore the relationship between education, training and career advancement
- develop and demonstrate project management behaviours
- make a smooth transition between schooling and the world of work.

SCOPE AND SEQUENCE — CAREER TRANSITIONS



—— Prerequisite - - - - Recommended prerequisite or corequisite

★ In development (scheduled implementation, September 1995).

MODULE CTR101: **JOB PREPARATION**

Level: **Introductory**

Theme: **Career Readiness**

Prerequisite: **None**

Module Description: Students develop successful employment search skills and a personal employment search portfolio.

Module Learner Expectations: *The student will:*

- identify and develop knowledge, skills and attitudes that will enable him or her to conduct successful employment searches
- prepare a personal employment search portfolio
- demonstrate effort to develop basic competencies.

MODULE CTR111: **PROJECT IA**
MODULE CTR112 **PROJECT 1B**

Level: **Introductory**

Theme: **Career Extensions**

Prerequisite: **To be determined by teacher**

Module Description: These project modules provide opportunities for students to apply and extend competencies developed in other CTS strands within contexts that are personally relevant. The specific time lines, deliverables/expectations and how projects will be assessed will be defined by the student in consultation with the teacher.

Module Learner Expectations: *The student will:*

- propose, manage and assess a project
- meet goals as defined within the project plan
- demonstrate effort to develop basic competencies.

MODULE CTR201: **JOB MAINTENANCE**

Level: **Intermediate**

Theme: **Career Readiness**

Prerequisite: **Job Preparation (CTR101)**

Module Description: Acquiring and maintaining employment requires knowledge of what employers value in their employees, as well as knowledge about personal expectations, rights and responsibilities. Students in this module become familiar with such workplace requirements and responsibilities.

Module Learner Expectations: *The student will*:

- identify and develop knowledge, skills and attitudes that will enable him or her to be successful in acquiring and maintaining employment
- demonstrate effort to improve basic competencies.

MODULE CTR211: **PROJECT 2A**
MODULE CTR212: **PROJECT 2B**
MODULE CTR213: **PROJECT 2C**
MODULE CTR214: **PROJECT 2D**
MODULE CTR215: **PROJECT 2E**

Level: **Intermediate**

Theme: **Career Extensions**

Prerequisite: **To be determined by teacher**

Module Description: These project modules provide a student with opportunities to apply and extend competencies developed in other CTS strands within contexts that are personally relevant. The specific time lines, deliverables/expectations and how projects will be assessed will be defined by the student in consultation with the teacher.

Module Learner Expectations: *The student will*:

- propose, manage and assess a project
- meet goals as defined within the project plan
- demonstrate effort to improve basic competencies.

MODULE CTR301: **PREPARING FOR CHANGE**

Level: **Advanced**

Theme: **Career Readiness**

Prerequisite: **Job Preparation (CTR101)**

Module Description: Students develop labour market knowledge and skills and analyze personal career plans.

Module Learner Expectations: *The student will:*

- analyze the role of government and labour unions in relation to employers and employees
- gather and analyze appropriate labour market information related to selected occupations and incorporate the findings into a personal career plan
- demonstrate effort to refine basic competencies.

MODULE CTR311: **PROJECT 3A**
MODULE CTR312: **PROJECT 3B**
MODULE CTR313: **PROJECT 3C**
MODULE CTR314: **PROJECT 3D**
MODULE CTR315: **PROJECT 3E**

Level: **Advanced**

Theme: **Career Extensions**

Prerequisite: **To be determined by teacher**

Module Description: These modules provide a student with the opportunities to apply and extend competencies developed in other CTS strands within contexts that are personally relevant. The specific time lines, deliverables/expectations and how projects will be assessed will be defined by the student in consultation with the teacher.

Module Learner Expectations: *The student will:*

- propose, manage and assess a project
- meet goals as defined within the project plan
- demonstrate effort to refine basic competencies.

COMMUNICATION TECHNOLOGY

STRAND RATIONALE

In an information society, characterized by rapid change in the social, economic and technological environments, students must be prepared to use information and technology effectively and efficiently. Communication Technology provides students with a broad awareness of the impact that presentation and communication, print, photography, and media design and application make in every aspect of their lives.

The knowledge and skills acquired from studying communication technology are transferable throughout the core and complementary curricula, giving students an edge in presenting their views and ideas, in understanding others and in completing projects.

For example, a student may no longer be restricted to doing an essay or preparing a written report as part of a course requirement. Instead the student may use any combination of communication technology skills to complete an assignment. On a more personal level, the student may apply these skills in everyday activities.

Finally, as the communications industry becomes more and more sophisticated, as the merging of the different communication technologies continue to evolve, it is imperative that students improve their level of "media and technological literacy" in order to cope with their daily chores. Students need to broaden their horizons to include the latest digital technology as it applies to print, photography, animation, audio and video production, whether or not they intend to apply these skills professionally or for their personal use. Communication skills are necessary for the pursuit of a successful career in any field, and communicating effectively using a variety of media gives students an advantage as they enter the information age of the 21st century.

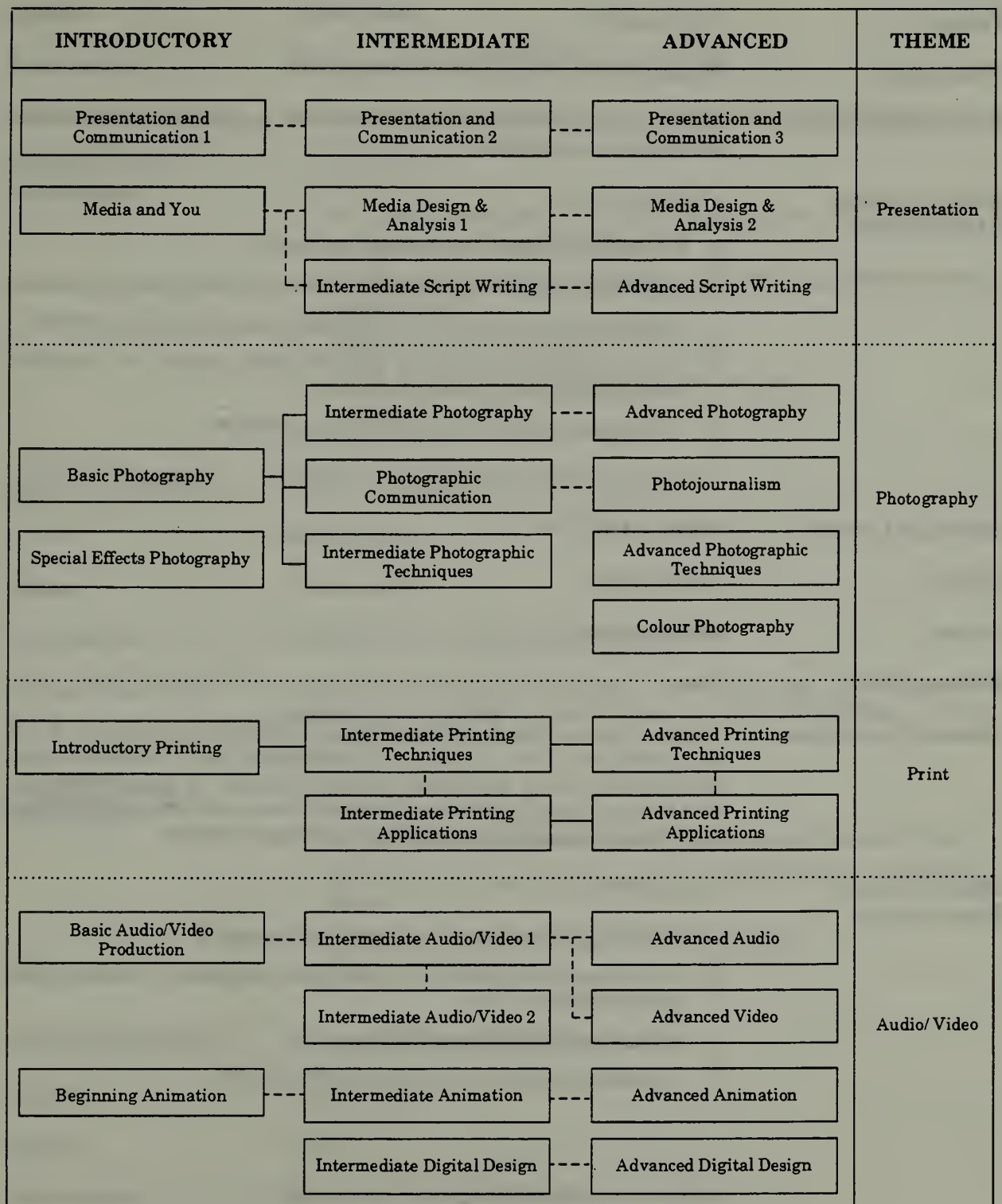
Within the philosophy of Career and Technology Studies, students in Communication Technology *will*:

- develop the basic knowledge, skills and attitudes necessary for exploration and pursuit of further training for a career in the communication technology field
- demonstrate an understanding of the various sectors of the industry and his or her own potential with respect to job opportunities
- learn how to function in a productive team environment and develop individual competence in a creative and imaginative way
- develop a positive self-concept and realistic life goals through exploring personal interests and aptitudes
- develop the ability to function as a media and technologically literate citizen and understand not only the technological factors, but also the social, cultural and

global issues that affect the various communication media

- develop expertise in applying creative thinking and enterprising/innovative strategies to problem solving
- develop an appreciation for environmental, safety and ethical issues relating to communication technology
- develop an appreciation for local, regional and global contribution to communication technology
- develop a positive attitude to work ethics, productivity and time management.

SCOPE AND SEQUENCE — COMMUNICATION TECHNOLOGY



—— Prerequisite ---- Recommended prerequisite or corequisite

MODULE COM101: **PRESENTATION AND COMMUNICATION 1**

Level: **Introductory**

Theme: **Presentation**

Prerequisite: **Media and You (COM102; Recommended)**

Module Description: Student communicate by using speech, body language and audio/visual materials and equipment.

Module Learner Expectations:

The student will:

- describe the steps in the presentation process
- apply the presentation process to communicate ideas and information
- apply the various media and techniques in the presentation process
- use the knowledge of the presentation process to evaluate presentations made by self and others
- demonstrate effort to develop basic competencies.

MODULE COM102: **MEDIA AND YOU**

Level: **Introductory**

Theme: **Presentation**

Prerequisite: **None**

Module Description: This module is a hands-on introduction to the various segments of the communication area of study: Presentation and Communication, Photography, Print, and Audio/Video Production. It is recommended that students, especially at the junior high level, take this module before proceeding to other Communication Technology modules.

Module Learner Expectations:

The student will:

- identify and describe current media and materials
- use photographic, print and audio/video equipment to communicate ideas and information
- prepare and deliver a presentation
- demonstrate effort to develop basic competencies.

MODULE COM103: BASIC PHOTOGRAPHY

Level: **Introductory**

Theme: **Photography**

Prerequisite: **Media and You (COM102; Recommended)**

Module Description: Students operate a camera to take photographs and produces prints.

Module Learner Expectations: *The student will:*

- use various photographic equipment, materials and processes to demonstrate basic photographic skills
- describe and/or use various processing methods; e.g., black and white, colour, digital
- describe the role of photography in society
- demonstrate effort to develop basic competencies.

MODULE COM104: SPECIAL EFFECTS PHOTOGRAPHY

Level: **Introductory**

Theme: **Photography**

Prerequisite: **Media and You (COM102; Recommended)**

Module Description: This module introduces the student to the creative use of the camera, the darkroom and/or digital techniques, in order to produce various photographic effects.

Module Learner Expectations: *The student will:*

- use the camera, shutter and aperture to create basic special effects
- apply darkroom/digital techniques to create different photographic effects
- demonstrate effort to develop basic competencies.

MODULE COM105: INTRODUCTORY PRINTING

Level: **Introductory**

Theme: **Print**

Prerequisite: **Media and You (COM102; Recommended)**

Module Description: This module introduces the student to basic layout/design techniques and various print reproduction processes; e.g., offset, screen, electrostatic.

Module Learner Expectations:

The student will:

- identify the fundamental characteristics and applications of type, paper and ink
- produce a design/layout
- apply printing techniques in the production of print/graphic projects
- demonstrate effort to develop basic competencies.

MODULE COM106: BASIC AUDIO/VIDEO PRODUCTION

Level: **Introductory**

Theme: **Audio/Video**

Prerequisite: **Media and You (COM102; Recommended)**

Module Description: Students acquire basic production skills using simple audio and/or video equipment and techniques.

Module Learner Expectations:

The student will:

- apply scripting, sound recording, camera and lighting skills and techniques in completing (a) production assignment(s)
- apply basic project planning skills to audio/video productions
- demonstrate effort to develop basic competencies.

MODULE COM107: BEGINNING ANIMATION

Level: **Introductory**

Theme: **Audio/Video**

Prerequisite: **Media and You (COM102; Recommended)**

Module Description: This module introduces the student to a variety of animation techniques and gives him or her the opportunity to produce simple animation.

Module Learner Expectations:

The student will:

- produce short animation assignments
- describe the techniques used in creating the animation
- identify and describe two animation styles and techniques
- demonstrate effort to develop basic competencies.

MODULE COM201: **PRESENTATION AND COMMUNICATION 2**

Level: **Intermediate**

Theme: **Presentation**

Prerequisite: **Presentation and Communication 1 (COM101; Recommended)**

Module Description: Students use verbal and non-verbal communication skills to produce presentations incorporating a variety of media.

Module Learner Expectations: *The student will*:

- apply the presentation process to specific audiences in more than one context; e.g., interview, news report, commercial, voice over
- select and use two or more media and technologies to present ideas and information to different audiences
- evaluate presentations made by self and other students
- demonstrate effort to improve basic competencies.

MODULE COM202: **MEDIA DESIGN AND ANALYSIS 1**

Level: **Intermediate**

Theme: **Presentation**

Prerequisite: **Media and You (COM102; Recommended)**

Module Description: This module enables the student to explore various media and examine their impact on personal, community and national interests.

Module Learner Expectations: *The student will*:

- analyze various media messages; e.g., radio, television, photography, print and describe the impact of the various messages from a personal, community and national perspective
- design and produce simple messages and communicate them through specified media; e.g., print, audio/video, animation
- demonstrate effort to improve basic competencies.

MODULE COM203: **INTERMEDIATE SCRIPT WRITING**

Level: **Intermediate**

Theme: **Presentation**

Prerequisite: **Media and You (COM102; Recommended)**

Module Description: Students write sample scripts for a variety of media forms.

Module Learner Expectations:

The student will:

- describe various media scripts and their formats
- identify and use a scriptwriting process in writing sample scripts for media format(s) assigned by the teacher
- identify the characteristics of a good script
- demonstrate effort to improve basic competencies.

MODULE COM204: **INTERMEDIATE PHOTOGRAPHY**

Level: **Intermediate**

Theme: **Photography**

Prerequisite: **Basic Photography (COM103)**

Module Description: This module reviews and expands on concepts outlined in Basic Photography, and includes composition, exposure, camera operation, image processing, proofing and enlarging.

Module Learner Expectations:

The student will:

- apply exposure principles and composition guidelines in photo assignments
- demonstrate proficiency in the theory and practice of image processing, proofing, enlarging and print display
- demonstrate effort to improve basic competencies.

MODULE COM205: **PHOTOGRAPHIC COMMUNICATION**

Level: **Intermediate**

Theme: **Photography**

Prerequisite: **Basic Photography (COM103)**

Module Description: Students use photographic prints, slides or digital images to communicate a message or tell a story.

Module Learner Expectations:

The student will:

- identify and describe storytelling/storyboarding techniques
- produce photographic prints, slides or digital images to communicate a message or tell a story
- develop the narration, music, sound effects or captions to accompany the images
- demonstrate effort to improve basic competencies.

MODULE COM206: INTERMEDIATE PHOTOGRAPHIC TECHNIQUES

Level: **Intermediate**

Theme: **Photography**

Prerequisite: **Basic Photography (COM103)**

Module Description: This module reviews and expands on concepts outlined in Intermediate Photography and emphasizes the application of lenses and depth of field in composition.

Module Learner Expectations:

The student will:

- describe the characteristics of different lenses and their applications
- apply depth-of-field principles to obtain a variety of results in completing photographic assignments
- describe and apply several darkroom digital techniques including cropping, contrast control, dodging, vignetting and burning in
- demonstrate effort to improve basic competencies.

MODULE COM207: INTERMEDIATE PRINTING TECHNIQUES

Level: **Intermediate**

Theme: **Print**

Prerequisite: **Introductory Printing (COM105)**

Module Description: This module introduces the student to single-register reproductive printing.

Module Learner Expectations:

The student will:

- prepare visual images for printing by various methods; e.g., offset plate, serigraphic stencils, relief lock
- prepare various masters; e.g., offset plate, serigraphic stencils, relief lock
- print image(s) in register using one or more methods
- finish printed material as required; e.g., trim, bind, pad, heat
- demonstrate effort to improve basic competencies.

MODULE COM208: INTERMEDIATE PRINTING APPLICATIONS

Level: **Intermediate**

Theme: **Print**

Prerequisite: **Intermediate Printing Techniques (COM207; Recommended)**

Module Description: Students apply the technique of single-register printing to a practical situation(s).

Module Learner Expectations:

The student will:

- address practical print-based task using single-register printing by applying previously learned printing techniques
  - prepare "camera-ready" copy and masters suitable for the printing task; e.g., offset plate, serigraphic stencils, relief lockup
  - reproduce images in appropriate quantity
  - use finishing techniques as required
- demonstrate effort to improve basic competencies.

MODULE COM209: INTERMEDIATE AUDIO/VIDEO 1

Level: **Intermediate**

Theme: **Audio/Video**

Prerequisite: **Basic Audio/Video (COM106; Recommended)**

Module Description: This module provides the student with an opportunity to expand on basic audio/video production techniques.

Module Learner Expectations:

The student will:

- complete assignments/projects using audio/video equipment
- develop skill in using production elements; e.g., light, sound, effects

- critique and evaluate audio/video assignments
- demonstrate effort to improve basic competencies.

MODULE COM210: **INTERMEDIATE AUDIO/VIDEO 2**

Level: **Intermediate**

Theme: **Audio/Video**

Prerequisite: **Intermediate Audio/Video 1 (COM209; Recommended)**

Module Description: Students build on production skills covered in Audio/Video Production 1, and use pre-production and post-production techniques.

Module Learner Expectations:

The student will:

- apply pre-production, production and post-production techniques to complete an audio/video project
- apply production elements (e.g., lighting, sound) to enhance the production
- apply post-production editing techniques
- demonstrate effort to improve basic competencies.

MODULE COM211: **INTERMEDIATE ANIMATION**

Level: **Intermediate**

Theme: **Audio/Video**

Prerequisite: **Beginning Animation (COM107; Recommended)**

Module Description: This module builds on the skills developed in Beginning Animation and stresses planning, idea development and storytelling techniques.

Module Learner Expectations:

The student will:

- demonstrate knowledge of various animation styles, techniques and applications
- produce short animation assignment(s) that:
  - develops an idea; e.g., establishes a theme, evokes an emotional response
  - tells a story
- demonstrate effort to improve basic competencies.

MODULE COM212: **INTERMEDIATE DIGITAL DESIGN**

Level: **Intermediate**

Theme: **Print**

Prerequisite: **None**

Module Description: This module introduces the student to the integration of various media for the purpose of producing a multimedia message.

Module Learner Expectations: *The student will*:

- transfer media elements to and from various sources
- design and produce a message using a combination of two or more media
- demonstrate effort to improve basic competencies.

MODULE COM301: **PRESENTATION AND COMMUNICATION 3**

Level: **Advanced**

Theme: **Presentation**

Prerequisite: **Presentation and Communication 2 (COM201; Recommended)**

Module Description: Students refine presentation skills to communicate to a target audience.

Module Learner Expectations: *The student will*:

- prepare presentation(s) for "real" audiences in a variety of contexts; e.g., in class, in school, in community
- prepare presentation materials (e.g., overhead transparencies, charts, graphs, radio/television advertisement) for delivery by self or another presenter
- evaluate a variety of presentations:
  - self and/or peer
  - professional and/or commercial
- demonstrate effort to refine basic competencies.

MODULE COM302: **MEDIA DESIGN AND ANALYSIS 2**

Level: **Advanced**

Theme: **Presentation**

Prerequisite: **Media Design and Analysis 1 (COM202; Recommended)**

Module Description: This module enables the student to use school and/or community resources to produce message(s) for a target audience to be delivered through two or more media.

Module Learner Expectations:

The student will:

- choose, justify and develop a message(s) for a target audience using two or more media
- analyze the same message(s) as delivered through different media
- critique media message/product
- demonstrate effort to refine basic competencies.

MODULE COM303: ADVANCED SCRIPT WRITING

Level: **Advanced**

Theme: **Presentation**

Prerequisite: **Intermediate Script Writing (COM203; Recommended)**

Module Description: This module enables the student to refine script writing skills by writing for specific media formats.

Module Learner Expectations:

The student will:

- demonstrate knowledge and skill specific to writing scripts for selected formats
- select a format (e.g., long, short) and write a script in that format for a target audience
- demonstrate effort to refine basic competencies.

MODULE COM304: ADVANCED PHOTOGRAPHY

Level: **Advanced**

Theme: **Photography**

Prerequisite: **Intermediate Photography (COM204; Recommended)**

Module Description: Students apply various light sources, multiple lighting arrangements and metering techniques with an emphasis on flash and studio lighting.

Module Learner Expectations:

The student will:

- identify and describe different camera and film formats
- use different camera and film formats

- apply the theory and operation of light-metering devices and electronic flash devices in a photographic assignment(s)
- apply studio lighting techniques to photographic assignment(s)
- demonstrate effort to refine basic competencies.

MODULE COM305: **PHOTOJOURNALISM**

Level: **Advanced**

Theme: **Photography**

Prerequisite: **Intermediate Photography (COM204; Recommended)**

Module Description: This module introduces the student to photojournalism.

Module Learner Expectations: *The student will:*

- apply knowledge of composition, lighting, exposure and image processing to photograph specified events
- integrate type and photographs to complete a layout(s)
- explore career options in photojournalism
- demonstrate effort to refine basic competencies.

MODULE COM306: **ADVANCED PHOTOGRAPHIC TECHNIQUES**

Level: **Advanced**

Theme: **Photography**

Prerequisite: **Intermediate Photographic Techniques (COM206; Recommended)**

Module Description: This module allows the student to create special photographic effects through a variety of approaches including advanced enlarging techniques, high contrast derivations, toning, retouching and print presentation.

Module Learner Expectations: *The student will:*

- use enlarging techniques to achieve a variety of photographic effects
- use retouching techniques to enhance the visual quality and/or to achieve different special effects with photographic prints
- alter/convert continuous tone black and white prints through the use of colour and through the use of high contrast materials and techniques
- demonstrate effort to refine basic competencies.

MODULE COM307: **COLOUR PHOTOGRAPHY**

Level: **Advanced**

Theme: **Photography**

Prerequisite: **Intermediate Photography (COM204)**

Module Description: This module introduces the student to colour photography.

Module Learner Expectations: *The student will:*

- identify and describe the additive and subtractive colour processes
- identify and describe the differences between negative and reversal photographic materials
- expose and process negative and/or reversal films and paper
- demonstrate effort to refine basic competencies.

MODULE COM308: **ADVANCED PRINTING TECHNIQUES**

Level: **Advanced**

Theme: **Print**

Prerequisite: **Intermediate Printing Techniques (COM207)**

Module Description: This module introduces the student to multi-register reproductive printing.

Module Learner Expectations: *The student will:*

- prepare visual images for printing in at least two colours
- prepare masters required to print images in at least two colours (e.g., offset plate, serigraphic stencils, relief lockups)
- print (an) image(s) in register
- use finishing techniques as required
- demonstrate effort to refine basic competencies.

MODULE COM309: **ADVANCED PRINTING APPLICATIONS**

Level: **Advanced**

Theme: **Print**

Prerequisite: **Advanced Printing Techniques (COM308; Recommended)**

Module Description: Students apply the technique of multi-register printing to a practical situation(s).

Module Learner Expectations:

The student will:

- address a practical print-based task applying previously learned techniques
- select suitable printing method, prepare masters suitable for the printing task (e.g., offset plate, serigraphic stencils, relief lockups) and reproduce in required quantity
- print images in register
- use finishing techniques as required
- demonstrate effort to refine basic competencies.

MODULE COM310: **ADVANCED AUDIO**

Level: **Advanced**

Theme: **Audio/Video**

Prerequisite: **Intermediate Audio/Video 1 (COM209; Recommended)**

Module Description: Students plan, develop and produce specific audio projects.

Module Learner Expectations:

The student will:

- apply pre-production, production and post-production techniques and strategies to complete an audio project
- use audio equipment and various sound recording techniques for production enhancement
- demonstrate effort to refine basic competencies.

MODULE COM311: ADVANCED VIDEO

Level: Advanced

Theme: Audio/Video

Prerequisite: Intermediate Audio/Video 1 (COM209; Recommended)

Module Description: In this module, the student plans, develops and produces specific video projects.

Module Learner Expectations: *The student will:*

- apply pre-production techniques and strategies to produce a video; e.g., prepare a proposal, treatment/script, time line, shot list, a video rehearsal
- apply production elements (e.g., lighting, sound, special effects) to the production
- use post-production techniques (e.g., edit decision list, narration, sound, music, effects, titles) to enhance the production
- present the final product to an audience for feedback
- demonstrate effort to refine basic competencies.

MODULE COM312: ADVANCED ANIMATION

Level: Advanced

Theme: Audio/Video

Prerequisite: Intermediate Animation (COM211; Recommended)

Module Description: Students apply production planning techniques to produce animation that tells a story, communicates an idea or message, or creates a mood or theme.

Module Learner Expectations: *The student will:*

- do production planning (research, story outline, synopsis, resource requirements, time line) for an animation project
- select and apply animation technique(s) to communicate the story, idea, theme or mood
- demonstrate effort to refine basic competencies.

MODULE COM313:	**ADVANCED DIGITAL DESIGN**
Level:	**Advanced**
Theme:	**Print**
Prerequisite:	**Intermediate Digital Design (COM212; Recommended)**
Module Description:	This module enhances the student's skill in using multimedia technology to produce messages for a target audience.
Module Learner Expectations:	*The student will:* • design a multimedia message to be communicated to a target audience • produce the message using two or more media • evaluate the effectiveness of the message • demonstrate effort to refine basic competencies.

CONSTRUCTION TECHNOLOGIES

STRAND RATIONALE

The products of construction are a reflection of the needs and wants of society. For centuries people have built structures and made objects to provide protection from the elements, and to make work easier.

Today our social and economic well-being is still closely linked to our ability to transform materials into useful products. Therefore, it is important that as students prepare for their future they should understand how industry organizes itself and applies technology in productive ways.

In Alberta the building and manufacturing sectors of the economy are characterized by relatively small entrepreneurial businesses that make products for domestic and foreign market needs.

In recent years dramatic changes have occurred in the way building and other products are designed and built. With the aid of computers, architects and engineers are able to simulate and evaluate designs with extreme accuracy. This precision translates into stronger structures, smaller tolerances, less waste and the need for a highly trained and flexible work force.

The Construction Technologies strand has been developed within Career and Technology Studies (CTS) to help meet this educational need. Students selecting modules from this strand have the opportunity to investigate and develop important knowledge, skills and attitudes relative to the design, construction and maintenance of buildings and other products.

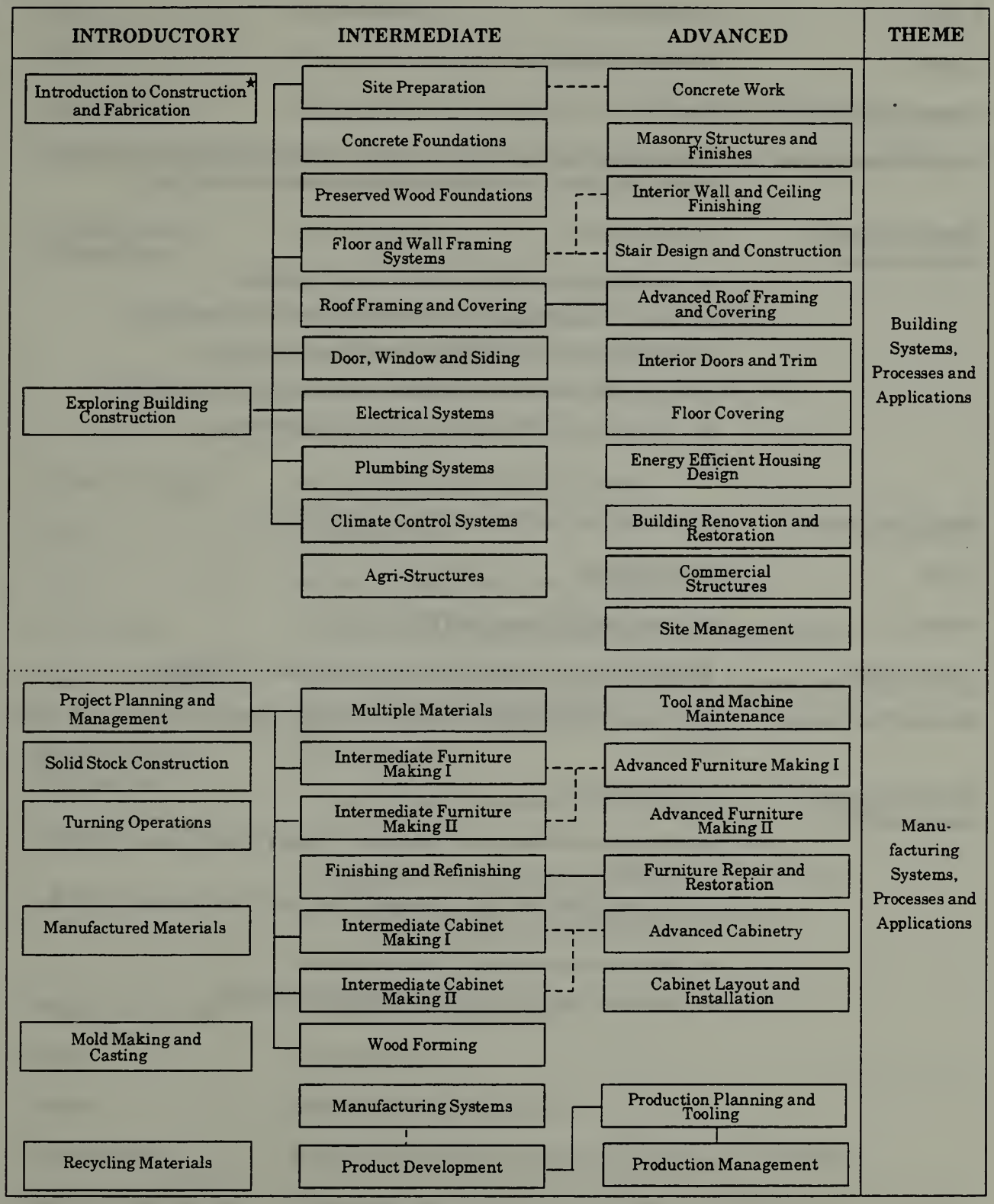
Students are provided with a broad base of relevant theory and practice that builds daily living and career-specific skills. Successful completion of modules in this strand is intended to provide students with the skills and experience required for entry-level employment or for further post-secondary education. This preparation is accomplished by encouraging students to:

- develop safe work and environmental practices
- develop self and resource management skills
- work with a variety of technologies and technological systems
- communicate and work as effective team members
- develop ethical work habits and relationships
- creatively seek practical solutions to problems
- develop consumer and life skills
- identify further educational and career opportunities.

Within the philosophy of CTS, students in Construction Technologies *will*:

- appreciate the importance of manufacturing and building construction in relationship to our personal, social and economic well-being
- demonstrate a working knowledge of materials, tools and processes that are used to create buildings and related products that meet the needs and wants of society
- apply effective and responsible decision making skills in the design and construction of buildings and durable goods
- develop positive attitudes regarding individual and team work responsibilities, quality production and service
- develop an appreciation for health, safety and environmental issues related to building and manufacturing
- appreciate the need for codes that regulate building construction and manufacturing activities
- link the knowledge, skills and attitudes developed in other strands and courses in meaningful and practical ways
- assess personal interests and abilities related to making realistic career choices.

SCOPE AND SEQUENCE — CONSTRUCTION TECHNOLOGIES



—— Prerequisite ---- Recommended prerequisite or corequisite

★ Prerequisite to all modules in this strand. Module is also in Fabrication Studies.

MODULE CFS101: **INTRODUCTION TO CONSTRUCTION AND FABRICATION**

Level: **Introductory**

Theme: **Materials and Structures**

Prerequisite: **None**

Module Description: The student develops basic tool and production skills to transform common building materials into useful products or structures.

Module Learner Expectations: *The student will:*

- describe the operation of a technological system
- compare the properties of common constructional materials
- identify and describe the safe use of basic hand tools
- apply the use of a technological system to construct a product
- demonstrate effort to develop basic competencies.

MODULE CON107: **EXPLORING BUILDING CONSTRUCTION**

Level: **Introductory**

Theme: **Construction Systems and Processes**

Prerequisite: **Introduction to Construction and Fabrication (CFS101)**

Module Description: The student investigates the ways building structures are planned and built.

Module Learner Expectations: *The student will:*

- identify and describe the types of systems found in a conventional building
- list and describe basic materials and hand tools associated with a conventional construction project
- build a simple scale or full-size structure
- demonstrate effort to develop basic competencies.

MODULE CON112: PROJECT PLANNING AND MANAGEMENT

Level: Introductory

Theme: Manufacturing Systems and Processes

Prerequisite: Introduction to Construction and Fabrication (CFS101)

Module Description: The student develops shop drawing, estimating, work scheduling and construction skills.

Module Learner Expectations:

The student will:

- prepare a full-size shop drawing
- prepare a material estimate and work schedule
- construct a product with multiple parts
- demonstrate effort to develop basic competencies.

MODULE CON113: SOLID STOCK CONSTRUCTION

Level: Introductory

Theme: Manufacturing Processes—Furniture Making

Prerequisite: Introduction to Construction and Fabrication (CFS101)

Module Description: The student uses built-up stock to construct a piece of furniture having both regular and irregular shapes.

Module Learner Expectations:

The student will:

- describe the characteristics of a variety of furniture woods
- create a full-size template from a scaled drawing
- construct an irregularly shaped product from solid stock
- demonstrate effort to develop basic competencies.

MODULE CON114: TURNING OPERATIONS

Level: Introductory

Theme: Manufacturing Processes

Prerequisite: Introduction to Construction and Fabrication (CFS101)

Module Description: The student uses wood-turning equipment and techniques to create a face plate and spindle-turning product(s).

Module Learner Expectations:

The student will:

- demonstrate the safe use of the wood lathe
- design and prepare a template
- use a wood lathe to produce a face plate and/ or spindle-turning product
- demonstrate effort to develop basic competencies.

MODULE CON116: **MANUFACTURED MATERIALS**

Level: **Introductory**

Theme: **Manufacturing Processes**

Prerequisite: **Introduction to Construction and Fabrication (CFS101)**

Module Description: The student selects and uses the appropriate composite materials and tools to construct a product or structure.

Module Learner Expectations:

The student will:

- identify and describe the characteristics of common manufactured materials
- demonstrate the safe use of a given power tool
- create a product from a manufactured material
- demonstrate effort to develop basic competencies.

MODULE CON118: **MOLD MAKING AND CASTING**

Level: **Introductory**

Theme: **Manufacturing Process**

Prerequisite: **Introduction to Construction and Fabrication (CFS101)**

Module Description: The student applies knowledge of casting materials to prepare a mold and cast or mold a product.

Module Learner Expectations:

The student will:

- list and describe the main ways of preparing a material for casting or molding
- make a mold or pattern to create a molded or cast product
- cast and finish a product
- demonstrate effort to develop basic competencies.

MODULE CON120: **RECYCLING MATERIALS**

Level: **Introductory**

Theme: **Manufacturing Processes**

Prerequisite: **Introduction to Construction and Fabrication (CFS101)**

Module Description: The student works independently or as a team member to create a recycling system.

Module Learner Expectations:

The student will:

- demonstrate an understanding of the issues related to recycling materials
- develop a system to collect, sort and/or process recyclable materials
- use recycled materials to create a product
- demonstrate effort to develop basic competencies.

MODULE CON201: **SITE PREPARATION**

Level: **Intermediate**

Theme: **Construction Systems and Processes**

Prerequisite: **Exploring Building Construction (CON107)**

Module Description: The student develops the knowledge and skills to acquire a building permit and prepare a site for excavation and foundation work.

Module Learner Expectations:

The student will:

- identify typical building site survey and excavation processes
- complete an application for a building permit
- assist in the layout of a building site
- identify employment and business opportunities related to survey work and earth moving
- demonstrate effort to improve basic competencies.

MODULE CON202: **CONCRETE FOUNDATIONS**

Level: **Intermediate**

Theme: **Construction Systems and Processes**

Prerequisite: **Site Preparation (CON 201)**

Module Description: The student develops the knowledge and skills related to the preparation and construction of a concrete foundation.

Module Learner Expectations: *The student will:*

- identify and describe common forming materials and processes
- assist in the concrete forming, placing and finishing
- identify employment and training opportunities associated with concrete forming and placing
- demonstrate effort to improve basic competencies.

MODULE CON203: **PRESERVED WOOD FOUNDATIONS**

Level: **Intermediate**

Theme: **Construction Systems and Processes**

Prerequisite: **Concrete Foundations (CON202; Recommended)**

Module Description: The student develops knowledge and skills related to the preparation and construction of a preserved wood foundation.

Module Learner Expectations: *The student will:*

- label and describe the parts of a typical preserved wood foundation
- identify the health hazards and describe the required precautions related to the use of treated woods and wood preservative
- assist in the construction and placement of a wood foundation
- demonstrate effort to improve basic competencies.

MODULE CON204: **FLOOR AND WALL FRAMING SYSTEMS**

Level: **Intermediate**

Theme: **Construction Systems and Processes**

Prerequisite: **Exploring Building Construction (CON107)**

Module Description: The student develops basic framing knowledge and skills associated with the construction of a floor and wall system.

Module Learner Expectations: *The student will:*

- identify and describe the parts of a floor and wall system
- use architectural drawings to prepare a material estimate for a floor and wall
- assist in the layout and construct a floor and wall system
- demonstrate effort to improve basic competencies.

MODULE CON205: ROOF FRAMING AND COVERING

Level: **Intermediate**

Theme: **Construction Processes—Weather Proofing**

Prerequisite: **Exploring Building Construction (CON107)**

Module Description: The student develops basic knowledge and skills associated with framing, sheathing and shingling.

Module Learner Expectations: *The student will:*

- identify and describe the different types and parts of a roof system
- use a roof drawing to determine the specifications and materials needed to frame and sheath a given roof
- assist in the framing, sheathing and finishing of a roof section
- demonstrate effort to improve basic competencies.

MODULE CON206: DOOR, WINDOW AND SIDING SYSTEMS

Level: **Intermediate**

Theme: **Construction Processes—Enclosing a Structure**

Prerequisite: **Floor and Wall and Framing Systems (CON 204)**

Module Description: The student applies and develops basic knowledge of door, window and siding systems as well as installation skills.

Module Learner Expectations: *The student will:*

- identify and describe common types of exterior doors, windows and siding materials
- read and interpret the appropriate drawings and specifications to create a door and window schedule and siding estimate

- assist in the installation of a prehung door, window unit and siding on a wall section
- demonstrate effort to improve basic competencies.

MODULE CON207: **ELECTRICAL SYSTEMS**

Level: **Intermediate**

Theme: **Building Systems**

Prerequisite: **Exploring Building Construction (CON107)**

Module Description: The student applies electrical principles, and develops an understanding of residential electrical code requirements as well as installation procedures.

Module Learner Expectations: *The student will*:

- list and describe the electrical systems found in a modern home
- prepare a house wiring drawing
- assist in the installation of a house wiring system
- identify employment and training opportunities related to electrical work
- demonstrate effort to improve basic competencies.

MODULE CON208: **PLUMBING SYSTEMS**

Level: **Intermediate**

Theme: **Construction Systems and Processes**

Prerequisite: **Exploring Building Construction (CON107)**

Module Description: The student develops basic knowledge and skills to fabricate and make repairs to a conventional water supply and drainage system.

Module Learner Expectations: *The student will*:

- identify the parts of a conventional plumbing system
- design and locate a water supply and drainage system for a typical household fixture
- assist in the installation of a water supply, ventilation and drainage system
- identify employment and training opportunities related to the plumbing trade
- demonstrate effort to improve basic competencies.

MODULE CON209: **CLIMATE CONTROL SYSTEMS**

Level: **Intermediate**

Theme: **Construction Systems**

Prerequisite: **Exploring Building Construction (CON107)**

Module Description: The student investigates common heating, ventilating and air conditioning (HVAC) systems and principles, and participates in the installation or maintenance of a HVAC system.

Module Learner Expectations:

The student will:

- list and describe the major components of a typical HVAC system
- prepare a preventive maintenance schedule for a HVAC system
- assist in the service or installation of a HVAC system
- demonstrate effort to improve basic competencies.

MODULE CON210: **AGRI-STRUCTURES**

Level: **Intermediate**

Theme: **Construction Processes**

Prerequisite: **Two or more related modules**

Module Description: The student will apply construction principles and skills to design and build a structure to be used in agriculture.

Module Learner Expectations:

The student will:

- identify the issues that must be addressed when designing an agri-structure
- create a design for an agri-structure
- construct a structure for use in agriculture
- demonstrate effort to improve basic competencies.

MODULE CON212: **MULTIPLE MATERIALS**

Level: **Intermediate**

Theme: **Manufacturing Processes**

Prerequisite: **Project Planning and Management (CON112)**

Module Description: The student develops a product that incorporates two or more types of materials in its construction.

Module Learner Expectations:

The student will:

- identify reasons for using dissimilar materials in a product
- design a product made from two or more dissimilar materials
- construct a product from two or more materials
- demonstrate effort to improve basic competencies.

MODULE CON213: INTERMEDIATE FURNITURE MAKING I

Level: Intermediate

Theme: Manufacturing Processes—Case Construction

Prerequisite: Project Planning and Management (CON112)

Module Description: The student uses solid and composite materials to build a box-type furniture product.

Module Learner Expectations:

The student will:

- describe the construction details of a typical box-type furniture product
- design and build a box-type furniture project
- list the skills required of a competent furniture maker
- demonstrate effort to improve basic competencies.

MODULE CON214: INTERMEDIATE FURNITURE MAKING II

Level: Intermediate

Theme: Manufacturing Processes—Frame and Panel Construction

Prerequisite: Project Planning and Management (CON112)

Module Description: The student uses solid and composite materials to build a frame and panel product or components.

Module Learner Expectations:

The student will:

- describe the construction detail of a typical frame and panel product or component
- design and build a frame and panel product or component
- demonstrate effort to improve basic competencies.

MODULE CON215: **FINISHING AND REFINISHING**

Level: **Intermediate**

Theme: **Manufacturing Processes—Furniture Making and Millwork Operations**

Prerequisite: **One or more related modules**

Module Description: The student applies knowledge of finishing materials and finishing techniques to apply new and replacement finishes.

Module Learner Expectations: *The student will:*

- identify common finishes and finishing/refinishing techniques
- identify and describe the health hazards and WHMIS regulations associated with the products used in finishing
- finish and/or refinish a product
- demonstrate effort to improve basic competencies.

MODULE CON216: **INTERMEDIATE CABINETRY I**

Level: **Intermediate**

Theme: **Manufacturing Processes—Web and Face Frame Construction**

Prerequisite: **Project Planning and Management (CON112)**

Module Description: The student uses solid and composite materials and applies conventional construction techniques to produce a built-in cabinet.

Module Learner Expectations: *The student will:*

- describe the construction details of a typical web and face frame product
- prepare a detailed material list and work schedule
- build a cabinet using web and face frame construction techniques
- demonstrate effort to improve basic competencies.

MODULE CON217: **INTERMEDIATE CABINETRY II**

Level: **Intermediate**

Theme: **Manufacturing Processes—Door and Drawer Construction**

Prerequisite: **Project Planning and Management (CON112)**

Module Description: The student uses solid and composite materials to build cabinet doors and drawers.

Module Learner Expectations: *The student will:*

- describe common methods of designing and constructing cabinet doors and drawers
- build and install a door and drawer component
- identify further training and employment opportunities related to cabinet making
- demonstrate effort to improve basic competencies.

MODULE CON218: WOOD FORMING

Level: Intermediate

Theme: Manufacturing Processes—Preparing and Bending Wood Stock

Prerequisite: Project Planning and Management (CON112)

Module Description: The student applies skills in mold making and wood conditioning to make a formed part or component.

Module Learner Expectations: *The student will:*

- describe common wood forming techniques
- build or obtain the necessary molds and clamping devices to blend a piece of solid stock or laminate
- make a product or component using a wood forming technique
- demonstrate effort to improve basic competencies.

MODULE CON219: MANUFACTURING SYSTEMS

Level: Intermediate

Theme: Manufacturing Systems

Prerequisite: Introduction to Construction and Fabrication (FAB116)

Module Description: The student investigates the nature of manufacturing systems used to produce durable goods.

Module Learner Expectations: *The student will:*

- describe current production systems used to manufacture durable goods

- identify the lines of communication and decision making in a typical production system
- explain how the production of durable goods is being altered by technology and the global economy
- demonstrate effort to improve basic competencies.

MODULE CON220: **PRODUCT DEVELOPMENT**

Level: **Intermediate**

Theme: **Manufacturing Systems**

Prerequisite: **Manufacturing Systems (CON219; Recommended)**

Module Description: The student works individually or as a team member to research, design and build a product suitable for mass production.

Module Learner Expectations: *The student will:*

- list and describe the steps involved in developing a product for manufacturing
- analyze the manufacturability of a given product
- assist in the development of a prototype
- demonstrate effort to improve basic competencies.

MODULE CON301: **CONCRETE WORK**

Level: **Advanced**

Theme: **Construction Processes—Concrete Forming and Finishing**

Prerequisite: **Site Preparation (CON 201; Recommended)**

Module Description: The student develops essential skills to form, place and finish a concrete project.

Module Learner Expectations: *The student will:*

- identify and describe concrete forming, placing and finishing techniques
- address the issues related to designing and building a concrete structure
- identify working conditions and employment opportunities associated with concrete forming, placement and finishing
- demonstrate effort to refine basic competencies.

MODULE CON302: **MASONRY STRUCTURES AND FINISHES**

Level: **Advanced**

Theme: **Construction Systems and Processes—Masonry Work**

Prerequisite: **Exploring Building Construction (CON107; Recommended)**

Module Description: The student develops basic knowledge of masonry finishes and application skills.

Module Learner Expectations: *The student will*:

- identify and describe the common types of masonry materials and finishes
- read and interpret a working drawing to prepare a cost estimate of brick veneer surface
- assist in the application of masonry finish or construction of a masonry structure
- identify employment and training opportunities related to masonry work
- demonstrate effort to refine basic competencies.

MODULE CON303: **INTERIOR WALL AND CEILING FINISHING**

Level: **Advanced**

Theme: **Construction Processes—Interior Finishing**

Prerequisite: **Floor and Wall Framing Systems (CON 204; Recommended)**

Module Description: The student develops basic wall finishing knowledge and skills to finish an interior wall.

Module Learner Expectations: *The student will*:

- describe the procedures related to the installation of insulation, vapour barrier and wall surfaces
- identify the health hazards and describe the safety precautions associated with the use of insulating and drywall materials
- assist in the preparation and finishing of a wall and ceiling surface
- demonstrate effort to refine basic competencies.

MODULE CON304: **STAIR DESIGN AND CONSTRUCTION**

Level: **Advanced**

Theme: **Construction Processes—Straight Flight Construction**

Prerequisite: **Floor and Wall Framing Systems (CON204; Recommended)**

Module Description: The student develops the necessary skills to construct a set of straight flight stairs.

Module Learner Expectations:

The student will:

- identify and describe different stair types and construction techniques
- state the building code regulations pertaining to residential stair design
- assist in the design, layout and construction of a straight flight of stairs
- demonstrate effort to refine basic competencies.

MODULE CON305: ADVANCED ROOF FRAMING AND COVERING

Level: **Advanced**

Theme: **Construction Processes—Rafter Layout and Assembly**

Prerequisite: **Roof Framing and Covering (CON205)**

Module Description: The student will develop basic competencies in laying out and assembling common and specialized rafters.

Module Learner Expectations:

The student will:

- identify and describe the design features of intersecting sloped roofs
- calculate the length of a given rafter using ratio and proportion techniques
- lay out and cut a set of rafters for a roof assembly
- demonstrate effort to refine basic competencies.

MODULE CON306: INTERIOR DOORS AND TRIM

Level: **Advanced**

Theme: **Construction Processes—Interior Finishing**

Prerequisite: **Two or more related modules**

Module Description: The student applies basic wall finishing knowledge and skills to install doors, railings and moldings.

Module Learner Expectations:

The student will:

- identify common types of doors, hardware and trim products

- assist in the installation of a door, door moldings and trim
- outline the career and training opportunities related to finish carpentry
- demonstrate effort to refine basic competencies.

MODULE CON307: **FLOOR COVERING**

Level: **Advanced**

Theme: **Construction Processes—Selection and Installation of Floor Coverings**

Prerequisite: **One or more related modules**

Module Description: The student selects and installs a typical floor covering used in residential and commercial buildings.

Module Learner Expectations: *The student will:*

- identify common types of residential and commercial floor coverings
- assist in the installation of floor covering
- outline the working conditions and job opportunities related to floor covering sales and service
- demonstrate effort to refine basic competencies.

MODULE CON308: **ENERGY EFFICIENT HOUSING DESIGN**

Level: **Advanced**

Theme: **Construction Systems—Energy Efficiency**

Prerequisite: **Exploring Building Construction (CON107)**

Module Description: The student investigates construction practices and support systems to create an energy efficient housing design.

Module Learner Expectations: *The student will:*

- identify and describe energy efficient construction materials and techniques
- calculate the energy efficiency in a given house design
- write a proposal to improve the energy efficiency of a given building
- demonstrate effort to refine basic competencies.

MODULE CON309: **BUILDING RENOVATION AND RESTORATION**

Level: **Advanced**

Theme: **Construction Processes—Building Repairs**

Prerequisite: **Four or more related modules**

Module Description: The student works with a client to plan and complete a building renovation and/or restoration.

Module Learner Expectations:

The student will:

- complete a feasibility study and cost estimate
- assist in a building renovation using traditional and modern construction materials and techniques
- outline the working conditions and job opportunities related to building renovations and restoration
- demonstrate effort to refine basic competencies.

MODULE CON310: **COMMERCIAL STRUCTURES**

Level: **Advanced**

Theme: **Construction Systems**

Prerequisite: **Four or more related modules**

Module Description: The student investigates structural designs, building techniques and work site practices related to commercial construction.

Module Learner Expectations:

The student will:

- compare the differences between residential and commercial construction
- describe common types of materials and construction techniques used in commercial construction
- demonstrate an understanding of commercial construction skills requirements and job site expectations
- demonstrate effort to refine basic competencies.

MODULE CON311: **SITE MANAGEMENT**

Level: **Advanced**

Theme: **Construction Systems**

Prerequisite: **Commercial Structures (CON310; Recommended)**

Module Description: The student investigates and describes site management procedures, trade roles and responsibilities.

Module Learner Expectations: *The student will:*

- outline current scheduling theories as practised in commercial construction
- describe the types of jobs and responsibilities commonly found on a construction site
- describe the work relationship that exists among trades and other occupational groups on a construction site
- demonstrate effort to refine basic competencies.

MODULE CON312: **TOOL AND MACHINE MAINTENANCE**

Level: **Advanced**

Theme: **Manufacturing Processes—Preventive Maintenance**

Prerequisite: **One or more intermediate modules**

Module Description: In this module, the student develops skills in preventive maintenance by routinely inspecting and servicing production tools and equipment.

Module Learner Expectations: *The student will:*

- identify and describe the essential elements and desired outcomes of a preventive maintenance program
- prepare a maintenance schedule for a given piece of equipment
- maintain and service specific tools and equipment
- demonstrate effort to refine basic competencies.

DESIGN STUDIES

STRAND RATIONALE

Design is an integral part of our society. It permeates every facet of civilization, sometimes in complex ways, many times quite simply. Everyone designs every day. Design brings a sense of order to our world. Young children in play design physical structures, visual images and systems of organization. Professional designers create these and many other things. Signs, displays, packages, road systems, computer games, furniture, automobiles, clothing, banquets, houses and highrises are a few examples of work produced by professional designers.

Students may not become "professional designers", but they still engage in design in some way. Design Studies helps students become aware of design in their environment, engages them in "designing", and shows them how design processes may be used in many contexts. Being aware of and appreciating the importance of design helps students become effective members of society.

Design can be described as a "creative problem-solving process, which begins with identifying a specific human need and results, ideally, in a product or situation that improves or enhances some aspect of our lives."★ Design can be both a noun and a verb. As a noun, design can describe a condition, as in the statement "... your design shows creativity." As a verb, design suggests a process or problem-solving activity, as in the statement "... I need to design a container to carry water." Design Studies students work primarily in the context of design as a verb.

All students are expected to develop problem-solving skills through their school experience. Design Studies deals specifically with solving problems in a variety of contexts, and is limited only by facility or imagination. Design Studies students may be expected to solve visual problems, structural problems and organizational problems using the context of their environment, their other classes and their community experiences. This ability to solve problems will be applied by Design Studies students to situations in their daily lives, in their workplace activities and in post-secondary studies. The theoretical and practical learning of processes, tools and technologies used during Design Studies is relevant, because the learning occurs in context.

There are many reasons for students to engage in Design Studies. For example, students may wish to:

- develop and apply creative abilities and aesthetic awareness
- develop investigative and research skills
- develop problem-solving abilities

★ Definition taken from *What Is Design?* (Alberta Culture and Multiculturalism).

- develop the ability to select an appropriate medium, model a solution and effectively communicate the solution to others
- recognize the importance of design in the human environment and its impact upon the natural environment
- appreciate the relationship between aesthetics, function, materials and processes
- become aware of the many factors that have to be taken into account in order to achieve appropriate and effective design solutions
- use appropriate technology to arrive at design solutions
- create innovative approaches, products and systems
- recognize significant historical events in design and how they have influenced subsequent design developments
- be better able to pursue a design career.

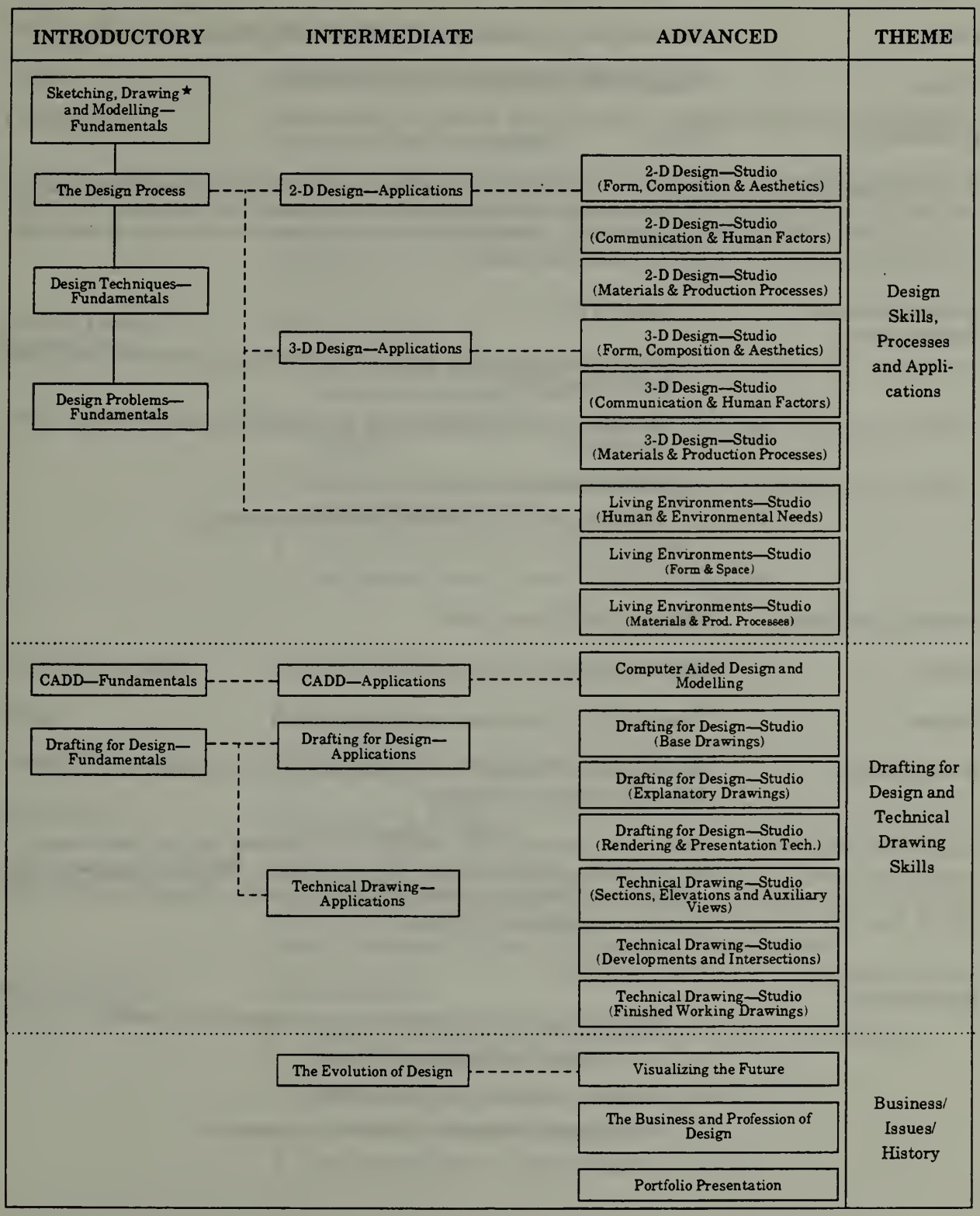
Design may be studied in its own right or it may be incorporated into other curricula. Key features of Design Studies and other design-based programs are to:

- encourage and facilitate students to be creative, innovative and curious
- teach students to identify and solve many different kinds of design challenges
- incorporate student-directed learning
- teach teamwork strategies and skills
- apply theory within a context
- use technology appropriately and effectively
- teach safe and effective work practices
- appreciate appropriate attitudes such as pursuing and valuing quality, ethics, professionalism, attention to detail, perseverance, and understanding the discipline of design
- encourage cross-curricular links
- reach beyond the school to the community, to create links, projects and contacts with designers, local groups, professionals and businesses.

Within the philosophy of Career and Technology Studies (CTS), students in Design Studies *will*:

- demonstrate creativity and innovation
- demonstrate aesthetic awareness
- use historical research as one basis for design activity
- identify and solve problems
- work in two and three dimensions
- work individually and as a team member
- recognize the value of technology and use it appropriately and effectively
- demonstrate and practise safe and effective work habits and attitudes
- develop and apply personal and interpersonal, verbal and non-verbal communication and presentation skills
- develop the ability to recognize, appreciate and create appropriate design solutions
- appreciate that designers may confront ethical, legal and moral issues in their work
- appreciate that design has an impact upon the environment
- develop a working knowledge of tools, materials and processes associated with specific tasks
- develop and maintain a design journal
- develop and maintain a portfolio of design solutions.

SCOPE AND SEQUENCE — DESIGN STUDIES



—— Prerequisite - - - - Recommended prerequisite or corequisite

★ Recommended prerequisite/corequisite for all other modules in the Design Skills, Processes and Applications, and Drafting for Design and Technical Drawing skills themes.

MODULE DES101: **SKETCHING, DRAWING AND MODELLING—FUNDAMENTALS**

Level: **Introductory; recommended for all Design Studies students**

Theme: **Design Skills, Processes and Applications**

Prerequisite: **None**

Module Description: Students are introduced to observational sketching and drawing, and modelling, and develop skills that can be used and enhanced in further design activity. Students are also introduced to a selection of materials and tools and their uses.

Module Learner Expectations: *The student will*:

- manually sketch, draw and model natural and manufactured three-dimensional forms
- use manual sketching/drawing and modelling materials and tools effectively
- maintain and present a module portfolio
- demonstrate effort to develop basic competencies.

MODULE DES102: **THE DESIGN PROCESS**

Level: **Introductory**

Theme: **Design Skills, Processes and Applications**

Prerequisite: **Sketching, Drawing and Modelling—Fundamentals (DES101; Recommended corequisite)**

Module Description: Design is a process-based activity. The student begins the process by developing an understanding of the problem through research. The student then develops possible solutions, working through them to arrive at a final appropriate solution.

Module Learner Expectations: *The student will*:

- apply a design process throughout the instructional period
- produce a designed solution
- maintain and present a module portfolio
- demonstrate effort to develop basic competencies.

MODULE DES103: **DESIGN TECHNIQUES—FUNDAMENTALS**

Level: **Introductory**

Theme: **Design Skills, Processes and Applications**

Prerequisite: **Sketching, Drawing and Modelling—Fundamentals (DES101; Recommended corequisite)**

Module Description: This is a skill building module. Here the student develops skills and techniques appropriate to design through engaging in a variety of activities in various contexts. Techniques may include drawing, use of notation, use of tools and equipment, and layout, cutting, joining and measuring.

Module Learner Expectations: *The student will*:

- sketch, draw and model to expand and/or solidify two- and three-dimensional design techniques
- identify, select and use elements and principles of design in project activities
- use two- and three-dimensional design techniques when solving simple design problems
- maintain and present a module portfolio
- demonstrate effort to develop basic competencies.

MODULE DES104: **DESIGN PROBLEMS—FUNDAMENTALS**

Level: **Introductory**

Theme: **Design Skills, Processes and Applications**

Prerequisite: **The Design Process (DES102) or Design Techniques—Fundamentals (DES103)**

Module Description: Students apply the design process (see The Design Process module) to solve a variety of two- and/or three-dimensional design problems using techniques such as sketching, drawing and modelling, and other techniques learned in Design Techniques—Fundamentals.

Module Learner Expectations: *The student will*:

- sketch, draw and model to expand and/or solidify two- and three-dimensional design techniques
- resolve simple design briefs working collaboratively
- maintain and present a design portfolio
- demonstrate effort to develop basic competencies.

MODULE DES105: **CADD—FUNDAMENTALS**

Level: **Introductory**

Theme: **Drafting for Design and Technical Drawing Skills**

Prerequisite: **Drafting for Design (DES106; Recommended corequisite)**

Module Description: The ability to use a personal computer effectively is becoming essential in design. In this module, the student develops basic skills and knowledge in Computer Aided Design and Drafting (CADD).

Module Learner Expectations: *The student will*:

- demonstrate basic knowledge and skills required to operate Computer Aided Design and Drafting (CADD) software
- use CADD to produce a multiview drawing and/or pictorial drawing
- maintain and present a design portfolio
- demonstrate effort to develop basic competencies.

MODULE DES106: **DRAFTING FOR DESIGN—FUNDAMENTALS**

Level: **Introductory**

Theme: **Drafting for Design and Technical Drawing Skills**

Prerequisite: **Sketching, Drawing and Modelling—Fundamentals (DES101; Recommended corequisite)**

Module Description: This module concentrates on basic skill development. The student develops basic knowledge, skills and techniques of drafting appropriate for visualizing and illustrating simple design problems.

Module Learner Expectations: *The student will*:

- produce pictorial representations and multiview drawings from sketches and/or three-dimensional objects

OR

- produce pictorial representations and surface developments (flat patterns) for garment construction
- maintain and present a design portfolio
- demonstrate effort to develop basic competencies.

MODULE DES201: **2-D DESIGN—APPLICATIONS**

Level: **Intermediate**

Theme: **Design Skills, Processes and Applications**

Prerequisite: **Design Techniques—Fundamentals (DES103) AND one other introductory level module (Recommended)**

Module Description: Students apply the design process and other knowledge, skills and processes learned at the introductory level to projects in two-dimensional design. Projects in this module typically deal with communication problems and issues. Students take greater responsibility for managing their learning and work cooperatively with others.

Module Learner Expectations: *The student will:*

- resolve intermediate level two-dimensional design briefs
- use the elements and principles of design effectively
- maintain and present a design portfolio
- demonstrate effort to improve basic competencies.

MODULE DES202: **3-D DESIGN—APPLICATIONS**

Level: **Intermediate**

Theme: **Design Skills, Processes and Applications**

Prerequisite: **Design Techniques—Fundamentals (DES103) AND one other introductory level module (Recommended)**

Module Description: Students apply the design process and other knowledge, skills and processes learned at the introductory level to projects in three-dimensional design. Projects in this module typically deal with problems and issues related to product design. Students take greater responsibility for managing their learning and work cooperatively with others.

Module Learner Expectations: *The student will:*

- resolve intermediate level three-dimensional design briefs
- use the elements and principles of design effectively
- maintain and present a design portfolio
- demonstrate effort to improve basic competencies.

MODULE DES203: **CADD—APPLICATIONS**

Level: **Intermediate**

Theme: **Drafting for Design and Technical Drawing Skills**

Prerequisite: **CADD—Fundamentals (DES105) and at least one other module where CADD was used (Recommended)**

Module Description: Students apply their learning from CADD—Fundamentals, and add knowledge, skills and techniques associated with Computer Aided Design and Drafting (CADD) in the context of new design-related tasks.

Module Learner Expectations: *The student will*:

- use Computer Aided Design and Drafting (CADD) software to produce intermediate level multiview and/or pictorial drawings
- maintain and present a design portfolio
- demonstrate effort to improve basic competencies.

MODULE DES204: **DRAFTING FOR DESIGN—APPLICATIONS**

Level: **Intermediate**

Theme: **Drafting for Design and Technical Drawing Skills**

Prerequisite: **Drafting for Design—Fundamentals (DES106) AND one other introductory level Design Studies module (Recommended)**

Module Description: Skills in assembly, section and/or auxiliary drawing are learned in this module. Students further develop the knowledge, skills and techniques learned at the introductory level in Drafting for Design—Fundamentals (e.g., pictorial drawing, multiview drawing, surface developments [flat pattern for garments]) by applying them in the context of more complex design projects.

Module Learner Expectations: *The student will*:

- produce pictorial drawings (e.g., isometric, oblique, one- and two-point perspective) using rendering styles and techniques (e.g., pencil, ink, colour, computer generated) within the context of design projects
- produce assembly, section, auxiliary, and/or multiview drawings either manually or with the aid of a computer

  OR

- produce surface developments for garments (flat patterns) either manually or with the aid of a computer
- maintain and present a design portfolio
- demonstrate effort to improve basic competencies.

MODULE DES205: **TECHNICAL DRAWING—APPLICATIONS**

Level: **Intermediate**

Theme: **Drafting for Design and Technical Drawing Skills**

Prerequisite: **Drafting for Design Fundamentals (DES106) AND one other introductory level Design Studies module recommended (Note: teachers may wish to make Drafting for Design Applications a corequisite for this module)**

Module Description: Students develop accurate multiview drawings from previously produced sketches, and learn the common understandings, conventions and language associated with technical drawing.

Module Learner Expectations: *The student will*:

- produce technical drawings for simple structures, products and/or components
- accurately dimension and notate drawings
- attend to all pertinent codes and specifications as they apply to drawings produced
- maintain and present a design portfolio
- demonstrate effort to improve basic competencies.

MODULE DES206: **THE EVOLUTION OF DESIGN**

Level: **Intermediate**

Theme: **Business/Issues/History**

Prerequisite: **None**

Module Description: Student develop a historical framework for the importance and relevance of design within a cultural context by examining past and contemporary examples of designed artifacts.

Module Learner Expectations: *The student will*:

- research historical and contemporary design
- make a formal presentation of research findings
- maintain and present a design portfolio
- demonstrate effort to improve basic competencies.

MODULE DES301: **2-D DESIGN—STUDIO (FORM, COMPOSITION AND AESTHETICS)**

Level: **Advanced**

Theme: **Design Skills, Processes and Applications**

Prerequisite: **2-D Design—Applications (DES201; Recommended)**

Module Description: The student applies the theories, skills and techniques of organization of the visual image onto the two-dimensional format, to resolve complex design problems. Emphasis is placed on exploring form, composition and aesthetics within appropriate communication design solutions.

Module Learner Expectations: *The student will:*

- address advanced problems in two-dimensional design
- use elements and principles of design as they apply to composition in two-dimensional design
- make rational judgments with respect to aesthetic quality in two-dimensional design solutions
- make rational judgments with respect to aesthetic quality in two-dimensional design solutions
- maintain and present a design portfolio
- demonstrate effort to refine basic competencies.

MODULE DES302: **2-D DESIGN—STUDIO (COMMUNICATION AND HUMAN FACTORS)**

Level: **Advanced**

Theme: **Design Skills, Processes and Applications**

Prerequisite: **2-D Design—Studio (Form, Composition and Aesthetics) (DES301; Recommended)**

Module Description: The student investigates the impact, importance and influence of two-dimensional design within a cultural context and the social responsibility of the designer, and applies this information when resolving complex communication design problems.

Module Learner Expectations: *The student will:*

- address complex problems in two-dimensional design involving communication
- identify examples of effective and ineffective two-dimensional design
- identify human factors commonly affected by two-dimensional design solutions and accommodate these within designed solutions
- maintain and present a design portfolio
- demonstrate effort to refine basic competencies.

MODULE DES303: **2-D DESIGN—STUDIO (MATERIALS AND PRODUCTION PROCESSES)**

Level: **Advanced**

Theme: **Design Skills, Processes and Applications**

Prerequisite: **2-D Design—Studio (Form, Composition and Aesthetics) (DES301; Recommended)**

Module Description: The student explores the production processes of two-dimensional design and the role of the designer as an organizer of appropriate materials, processes and systems. This understanding is applied by the student in the resolution of complex two-dimensional design problems.

Module Learner Expectations: *The student will*:

- address advanced level problems in two-dimensional design involving materials and production processes
- select materials based on their properties and justify the use in the context of two-dimensional design; e.g., what works in a given situation to achieve a desired affect
- design and/or select and use a process to reproduce a two-dimensional product in quantity
- maintain and present a design portfolio
- demonstrate effort to refine basic competencies.

MODULE DES304: **3-D DESIGN—STUDIO (FORM, COMPOSITION AND AESTHETICS)**

Level: **Advanced**

Theme: **Design Skills, Processes and Applications**

Prerequisite: **3-D Design—Applications (DES202; Recommended)**

Module Description: Students deal with such aspects as shaping, massing, proportion, scale, contrast, colour, texture and finish within the context of complex three-dimensional design projects.

Module Learner Expectations: *The student will*:

- produce advanced level designed solutions
- use the elements, principles, and considerations common to three-dimensional composition
- use various materials, and the processes required to shape and join these materials, to create desired forms

- demonstrate familiarity with the symbolic and cultural connotations of design, and make aesthetic judgments about the design solution(s) generated
- maintain and present a design portfolio
- demonstrate effort to refine basic competencies.

MODULE DES305: **3-D DESIGN—STUDIO (COMMUNICATION AND HUMAN FACTORS)**

Level: **Advanced**

Theme: **Design Skills, Processes and Applications**

Prerequisite: **3-D Design—Studio (Form, Composition and Aesthetics) (DES304; Recommended)**

Module Description: Students are introduced to human factors and considerations in designed artifacts, including ergonomics, semantics and semiotics.

Module Learner Expectations: *The student will*:

- apply human factors, principles and considerations (i.e., ergonomics, semantics, semiotics) in the designing process, which results in a three-dimensional product for human use
- account for relationship between the application of human factors, principles and considerations and the articulation (system, sequence) of a product design
- maintain and present a design portfolio
- demonstrate effort to refine basic competencies.

MODULE DES306: **3-D DESIGN—STUDIO (MATERIALS AND PRODUCTION PROCESSES)**

Level: **Advanced**

Theme: **Design Skills, Processes and Applications**

Prerequisite: **3-D Design—Studio (Form, Composition and Aesthetics) (DES304; Recommended)**

Module Description: Students expand their knowledge of the materials used for the production of products, and the technologies and production processes employed to shape and join materials and to assemble products. They will become familiar with the principles of manufacturing, and the materials, technologies and processes appropriate for manufacturing a product in various production quantities.

Module Learner Expectations:

The student will:

- use materials, technologies and production processes relevant to a particular area of three-dimensional design to produce a product
- apply appropriate processes to form, shape, join, fasten, assemble and/or construct with various materials based on their properties
- describe the relationship between the materials, production processes and intended production quantities, and the way a product is designed
- maintain and present a design portfolio
- demonstrate effort to refine basic competencies.

MODULE DES307: LIVING ENVIRONMENTS—STUDIO (HUMAN AND ENVIRONMENTAL NEEDS)

Level: **Advanced**

Theme: **Design Skills, Processes and Applications**

Prerequisite: **The Design Process ((DES102; Recommended)**

Module Description: The student learns to develop appropriate design solutions for specific human needs through architectural, environmental or interior design. The student learns to utilize design methodology and teamwork in the development of these solutions.

Module Learner Expectations:

The student will:

- devise creative designed solutions based in architectural, environmental and/or interior design, that address human and/or environmental needs
- use elements, principles and processes of design to deal with identified human and/or environmental needs within design solutions
- describe ways human and environmental requirements affect design
- maintain and present a design portfolio
- demonstrate effort to refine basic competencies.

MODULE DES308: **LIVING ENVIRONMENTS—STUDIO (FORM AND SPACE)**

Level: **Advanced**

Theme: **Design Skills, Processes and Applications**

Prerequisite: **Living Environments—Studio (Human and Environmental Needs) (DES307; Recommended)**

Module Description: The student learns to consider form and space when developing specific architectural, environmental or interior design solutions specific to human and/or environmental needs. The student assesses solutions on the basis of functional and aesthetic considerations and appropriateness within the human environment. Materials and production processes may be considered at this stage though not necessarily resolved. When designing at the micro level, students consider the ergonomic aspects of design.

Module Learner Expectations: *The student will:*

- address advanced level problems in one or more Living Environment themes (architectural design, environmental design, interior design)
- apply elements and principles of design (e.g, space, form) and ergonomics within architectural, environmental, and/or interior design
- make rational judgments with respect to aesthetic quality in architectural, environmental or interior design
- maintain and present a design portfolio
- demonstrate effort to refine basic competencies.

MODULE DES309: **LIVING ENVIRONMENTS—STUDIO (MATERIALS AND PRODUCTION PROCESSES)**

Level: **Advanced**

Theme: **Design Skills, Processes and Applications**

Prerequisite: **Living Environments—Studio (Human and Environmental Needs) (DES307; Recommended)**

Module Description: The student develops design solutions specific to architectural, environmental or interior design; learning about, utilizing and/or specifying appropriate materials and production processes.

Module Learner Expectations: *The student will:*

- use appropriate materials and production processes in resolving set design problems

- identify materials and products used in architectural, environmental, and/or interior design, and give reasons for their use based on their properties
- identify and/or specify production processes, and/or methods for manufacturing products common to architectural, environmental,and/or interior design
- maintain and present a design portfolio
- demonstrate effort to refine basic competencies.

MODULE DES310: **COMPUTER AIDED DESIGN AND MODELLING—STUDIO**

Level: **Advanced**

Theme: **Drafting for Design and Technical Drawing Skills**

Prerequisite: **CADD—Applications (DES203; Recommended)**

Module Description: Students solve design problems using advanced Computer Aided Design and Drafting (CADD) methods, utilizing advanced commands, three-dimensional modelling techniques, rendering, shading and animation techniques.

Module Learner Expectations: *The student will*:

- use advanced Computer Aided Design and Drafting (CADD) commands and techniques to design working prototypes of solutions to advanced level design problems
- maintain and present a design portfolio
- demonstrate effort to refine basic competencies.

MODULE DES311: **DRAFTING FOR DESIGN—STUDIO (BASE DRAWINGS)**

Level: **Advanced**

Theme: **Drafting Design and Technical Drawing Skills**

Prerequisite: **Drafting for Design—Applications (DES204; Recommended)**

Module Description: Students concentrate on various drawing and drafting types to illustrate design concepts and solutions. These might include freehand drawings, illustrative views, isometric drawings, perspective drawings, axiometric drawings, surface developments (flat pattern). This is a skill-building module with the emphasis on line drawing.

Note: Completed drawings from this module may be used as preparatory material for subsequent Drafting for Design Studio or Technical Drawing Studio modules.

Module Learner Expectations:

The student will:

- use freehand and mechanical and/or computer aided drafting techniques in addressing complex projects in such areas as architecture, fashion, product, furniture and/or other design applications
- apply various drawing construction principles through pictorial drawings such as isometric, perspective and axiometric
- address design detailing, making rational judgments with respect to proportion, scale, composition, codes and standards
- maintain and present a design portfolio
- demonstrate effort to define basic competencies.

MODULE DES312: DRAFTING FOR DESIGN—STUDIO (EXPLANATORY DRAWINGS)

Level: **Advanced**

Theme: **Drafting for Design and Technical Drawing Skills**

Prerequisite: **Drafting for Design—Studio (Base Drawings) (DES311; Recommended)**

Module Description: Complex explanatory drawings are developed from base (line) drawings, including exploded views, cut-aways, revolutions, sectional, and shadow and reflection construction. Further development of drawings and/or drawing types begun in Drafting for Design—Studio (Base Drawings) may also be included. This is a skill-building module with the emphasis on explanatory line drawings.

Module Learner Expectations:

The student will:

- use explanatory drawing techniques (e.g., exploded views, cut-away views, shadow and reflection construction) to convey and communicate complex design solutions
- use appropriate drawing techniques to illustrate principles of assembly, mechanical function, usage, etc.
- address principles of communication through illustrative drawing and detailing (e.g., attention to the composition of exploded views, optimizing location of cut-away sections)
- maintain and present a design portfolio
- demonstrate effort to refine basic competencies.

MODULE DES313: **DRAFTING FOR DESIGN—STUDIO (RENDERING AND PRESENTATION TECHNIQUES)**

Level: **Advanced**

Theme: **Drafting for Design and Technical Drawing Skills**

Prerequisite: **Drafting for Design—Studio (Base Drawings) (DES311; Recommended)**

Module Description: Rendering techniques are applied to line drawings (base or developed), with attention to light, colour and various media(coloured pencils, marker pens, water colours, computer rendered, etc.). Emphasis is on rendering.
Presentation techniques are used to compose high quality illustrations to communicate design solution, using rendered drawings, context backgrounds, collage and montage techniques, titles, text, etc. Emphasis is on visual presentation.

Module Learner Expectations: *The student will*:

- use various rendering techniques and media to create high quality visual representations of design solutions
- create well-composed presentations of design solutions using a combination of materials and methods, such as rendered drawings, photographs, text, theme boards, CADD, video, etc.
- maintain and present a design portfolio
- demonstrate effort to refine basic competencies.

MODULE DES314: **TECHNICAL DRAWING—STUDIO (SECTIONS, ELEVATIONS AND AUXILIARY VIEWS)**

Level: **Advanced**

Theme: **Drafting for Design and Technical Drawing Skills**

Prerequisites: **Technical Drawing—Applications (DES312; Recommended)**

Module Description: Students build upon their learning from the intermediate level. They may use previously produced sketches and multiview drawings as a basis for further work. The focus of this module is on the production of sections, elevations and auxiliary drawings.

Module Learner Expectations: *The student will*:

- produce detailed section, elevation and auxiliary views for fabrication, manufacturing and/or construction
- attend to codes, specifications and conventions in the drawings produced
- maintain and present a drawing portfolio
- demonstrate effort to refine basic competencies.

MODULE DES315: **TECHNICAL DRAWING—STUDIO (DEVELOPMENTS AND INTERSECTIONS)**

Level: **Advanced**

Theme: **Drafting for Design and Technical Drawing Skills**

Prerequisite: **Technical Drawing—Studio (Sections, Elevations and Auxiliary Views) (DES314; Recommended)**

Module Description: Within fabrication, manufacturing and/or construction there is a need to clearly identify and specify details of various product components. Students focus on representations of developments (e.g., sheet metal flashing, clothing patterns) and intersections (e.g., the intersection of two heating ducts).

Module Learner Expectations: *The student will*:

- produce surface developments and intersections for fabrication, construction and/or manufacturing
- produce drawings for different applications (e.g., heating ducting, tent manufacturing, outerwear manufacturing) and representing different materials (e.g., sheet metal, plastic, canvas, wool)
- attend to codes, specifications and conventions in the drawings produced
- maintain and present a design portfolio
- demonstrate effort to refine basic competencies.

MODULE DES316: **TECHNICAL DRAWING—STUDIO (FINISHED WORKING DRAWINGS)**

Level: **Advanced**

Theme: **Drafting for Design and Technical Drawing Skills**

Prerequisites: **Technical Drawing—Studio (Sections, Elevations and Auxiliary Views) (DES314; Recommended)**

Module Description: Working drawings are required to clearly diagram and illustrate the design specifications for a product, structure and/or process. They provide the basis for fabrication, manufacturing and/or construction. Students complete a set of working drawings for a self-generated or teacher-specified designed item.

Module Learner Expectations: *The student will*:

- produce a complete set of working drawings for a student-generated or teacher-specified designed item

- attend to codes, specifications and conventions as in the drawings produced
- maintain and present a design portfolio
- demonstrate effort to refine basic competencies.

MODULE DES317: **VISUALIZING THE FUTURE**

Level: **Advanced**

Theme: **Business/Issues/History**

Prerequisite: **The Evolution of Design (DES206; Recommended)**

Module Description: What will the role of the designer be in the future? What challenges will designers face? Students explore new possibilities in design through this module.

Module Learner Expectations: *The student will:*

- identify a potential design challenge (e.g., a habitat for a space colony) and design a solution for it
- provide research supporting the design
- maintain and present a design portfolio
- demonstrate effort to refine basic competencies.

MODULE DES318: **THE BUSINESS AND PROFESSION OF DESIGN**

Level: **Advanced**

Theme: **Business/Issues/History**

Prerequisite: **None**

Module Description: The student develops an understanding of the business aspect of the design profession including educational qualifications, opportunities in design and some of the issues and challenges designers face. Ethical, legal and social issues may be explored in this module.

Module Learner Expectations: *The student will:*

- research one area of the business/profession of design
- identify and consider various issues faced by designers
- maintain and present a design portfolio
- demonstrate effort to refine basic competencies.

MODULE DES319:	**PORTFOLIO PRESENTATION**
Level:	**Advanced**
Theme:	**Business/Issues/History**
Prerequisite:	**None**
Module Description:	Students taking this module prepare a portfolio for a specific purpose such as entry into the workplace or a post-secondary institution.
Module Learner Expectations:	*The student will*: • prepare a presentation portfolio for the purpose of gaining entry into the workplace and/or a post-secondary educational institution • present the portfolio in an interview setting • demonstrate effort to refine basic competencies.

ENTERPRISE AND INNOVATION

STRAND RATIONALE

Enterprising individuals are agents of change. They make things happen. They recognize opportunities for improvement in goods, services and processes and undertake to mobilize resources to meet challenges, to innovate. They develop new ways of responding to the many changes and challenges we face in an increasingly competitive and interrelated world.

Schools can play a key role in helping students become more enterprising and innovative. Enterprise and Innovation is designed to challenge high school students of all ability levels to expand their confidence, experience and skills as innovators and leaders, encouraging them to recognize how these competencies can help them succeed in any career, whether as a volunteer, an employer or an employee.

One such career area, entrepreneurship, depends particularly on the ability to be enterprising and innovative. **Entrepreneurship** involves the recognition of opportunities (needs, wants and problems) and the use of resources to implement innovative ideas for new, thoughtfully planned ventures. **Intrapreneurship** is entrepreneurship occurring within an existing organization.

Throughout Enterprise and Innovation entrepreneurship will be used frequently as the context for learning, helping students develop expertise at:

- identifying opportunities
- monitoring and revising plans as necessary
- marshalling resources
- developing sensitivity to the needs and wants of client groups
- developing and implementing plans
- building teamwork and leadership skills.

Within a secure and supportive environment students will have opportunities to develop and implement venture plans, either simulated or in real terms. These venture plans could be community-, public service- or profit-related. Through these ventures, students will develop numeracy, communication, decision-making and social skills. Students will be encouraged to link the competencies they have developed through past experiences, hobbies and interests with and between those of core and complementary courses.

Ventures can take many forms. For example, students might:

- establish a business venture
- establish a volunteer, community or service program
- plan, market and manage an event or a conference
- produce, market and distribute a book or video.

These venture plans link technical, managerial, enterprise and innovation competencies. At the same time, opportunities to better understand career options can help students invest their

energies more effectively in those occupational areas they prefer and in which they have the aptitude to succeed. The program helps students understand basic economic principles and business processes. In addition, they develop an increased awareness and appreciation of the roles of small business, entrepreneurship and self-employment in society.

High school students make crucial career decisions as they move toward independence and adult responsibilities. In view of the frequent career changes that students can expect to experience throughout their work life, they need to develop competencies that can be transferred readily. They need to be able to recognize opportunity and to develop confidence in their ability to act on that opportunity. This process involves identifying and assessing their strengths, aptitudes and interests as they prepare to leave high school, continue in post-secondary programs, or move directly into the workplace.

Within the philosophy of Career and Technology Studies, students in Enterprise and Innovation *will*:

- identify and enhance personal motivation, self-concept and the knowledge, skills and attitudes that foster enterprise and innovation in all kinds of endeavours, such as business ventures, community ventures, non-profit ventures. Skills included are:
  - creative thinking
  - goal setting
  - communicating
  - researching/organizing
  - decision making/problem solving
  - team building
  - managing
  - planning

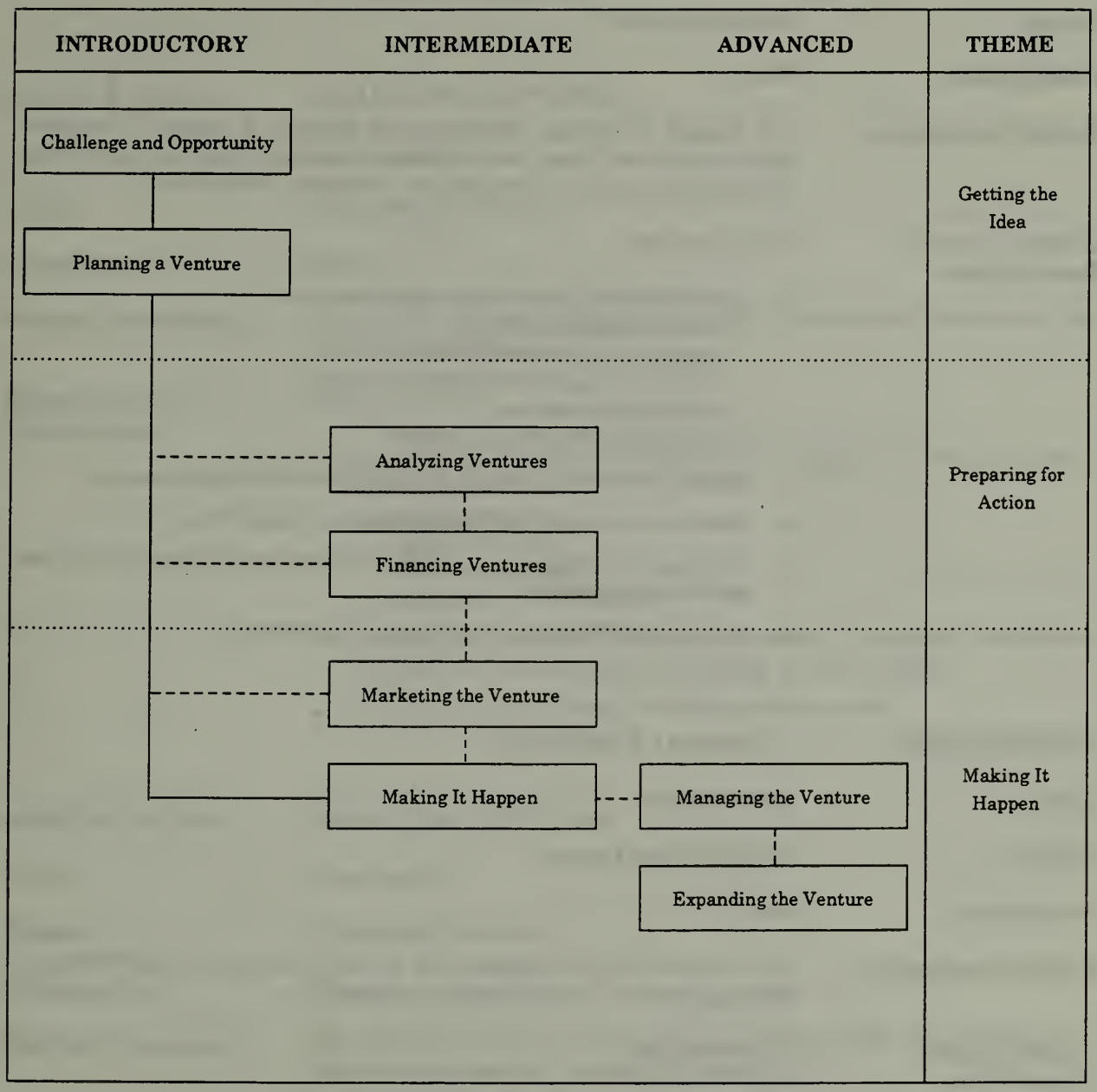
- develop greater awareness of the role of business, entrepreneurship and intrapreneurship in our society and the global economy

- translate change and challenge into a viable opportunity by identifying options, resources and sources of support.

Learner expectations defined in Enterprise and Innovation comprise the competencies to help students become:

- more comfortable with change and innovation
- more entrepreneurial or intrapreneurial in any career, whether as a volunteer, an employer or an employee
- more accepting of both success and failure as learning opportunities
- more sophisticated consumers of business services
- more aware of public and private sector development initiatives and investments.

SCOPE AND SEQUENCE — ENTERPRISE AND INNOVATION



—— Prerequisite ---- Recommended prerequisite or corequisite

MODULE E&I101: **CHALLENGE AND OPPORTUNITY**

Level: **Introductory**

Theme: **Getting the Idea**

Prerequisite: **None**

Module Description: The student identifies, compares and assesses a variety of venture opportunities and ideas, and investigates career paths and possibilities where enterprise and innovation are particularly important.

Module Learner Expectations:

The student will:

- apply strategies and develop competencies in:
  - identifying opportunities
  - creating and generating ideas
  - establishing needs, wants and priorities
  - assessing alternatives
  - assessing environmental impact
- identify, compare and assess a variety of venture opportunities
- describe the process and components of a venture plan
- investigating career options where enterprise and innovation are particularly important
- demonstrate effort to develop basic competencies.

MODULE E&I102: **PLANNING A VENTURE**

Level: **Introductory**

Theme: **Preparing for Action**

Prerequisite: **None**

Module Description: The student has the opportunity to learn and apply the "venture-planning process" while planning a venture.

Module Learner Expectations:

The student will:

- demonstrate qualities that initiate change:
  - initiative
  - flexibility
  - leadership/team member
- apply personal goal-setting and problem-solving strategies that facilitate change effectively
- assess potential risks and propose strategies for assessing risks
- develop strategies for securing resources and support to implement a venture

- select, plan and assess a venture
- consider career options
- demonstrate effort to develop basic competencies.

MODULE E&I201: **ANALYZING VENTURES**

Level: **Intermediate**

Theme: **Preparing for Action**

Prerequisite: **None**

Module Description: The student gathers and analyzes data to make informed decisions on the feasibility of ventures.

Module Learner Expectations: *The student will:*

- describe and apply various methodologies for analyzing and evaluating ventures:
  - market analysis
  - industry analysis
  - financial analysis
  - product/service evaluation
- analyze the research, compare a variety of ventures and make informed decisions about the feasibility of each venture
- demonstrate effort to improve basic competencies.

MODULE E&I202: **FINANCING VENTURES**

Level: **Intermediate**

Theme: **Preparing for Action**

Prerequisite: **None**

Module Description: The student compares various sources of financing and chooses the method that is best for financing the venture.

Module Learner Expectations: *The student will:*

- analyze the advantages and disadvantages of financial options
- examine various sources of financing for ventures
- distinguish between short- and long-term financing
- demonstrate the process of applying for different types of financing
- demonstrate effort to improve basic competencies.

MODULE E&I203: **MARKETING THE VENTURE**

Level: **Intermediate**

Theme: **Making It Happen**

Prerequisite: **None**

Module Description: The student appraises various marketing strategies and formulates a marketing strategy for a venture.

Module Learner Expectations:

The student will:

- analyze various marketing strategies for their applicability in terms of marketing mix for a target market
- formulate and implement a marketing strategy for a particular venture
- appraise the strengths and weaknesses of the marketing strategy, and revise as necessary
- demonstrate effort to improve basic competencies.

MODULE E&I204: **MAKING IT HAPPEN**

Level: **Intermediate**

Theme: **Making It Happen**

Prerequisite: **None**

Module Description: The student implements and assesses a venture.

Module Learner Expectations:

The student will:

- implement a venture
- establish management procedures required to start the venture
- demonstrate leadership qualities in implementing the venture
- manage problem solving and decision making at each implementation stage of the venture
- assess the venture
- demonstrate effort to improve basic competencies.

MODULE E&I301: **MANAGING THE VENTURE**

Level: **Advanced**

Theme: **Making It Happen**

Prerequisite: **None**

Module Description: The student develops management procedures for a venture.

Module Learner Expectations:

The student will:

- manage the venture by performing the following functions:
  - planning
  - organizing
  - managing human resources
  - managing finances
  - monitoring
- establish management procedures necessary to implement the venture
- examine critical risks, and develop contingency procedures
- monitor the venture plan, and revise as necessary
- demonstrate effort to refine basic competencies.

MODULE E&I302: **EXPANDING THE VENTURE**

Level: **Advanced**

Theme: **Making It Happen**

Prerequisite: **None**

Module Description: The student explores and assesses the elements of success in expanding a venture.

Module Learner Expectations:

The student will:

- analyze the rationale for expanding a particular venture
- evaluate the options available, and develop expansion strategy
- compare personal philosophy with venture goals
- implement the expansion of a particular venture
- assess the elements of "success" (as personally defined) of the expanded venture
- demonstrate effort to refine basic competencies.

FINANCIAL MANAGEMENT

STRAND RATIONALE

In our rapidly changing complex world, the ability to manage our financial affairs is a basic requirement.

Financial management is required in all aspects of society and is an essential life skill.

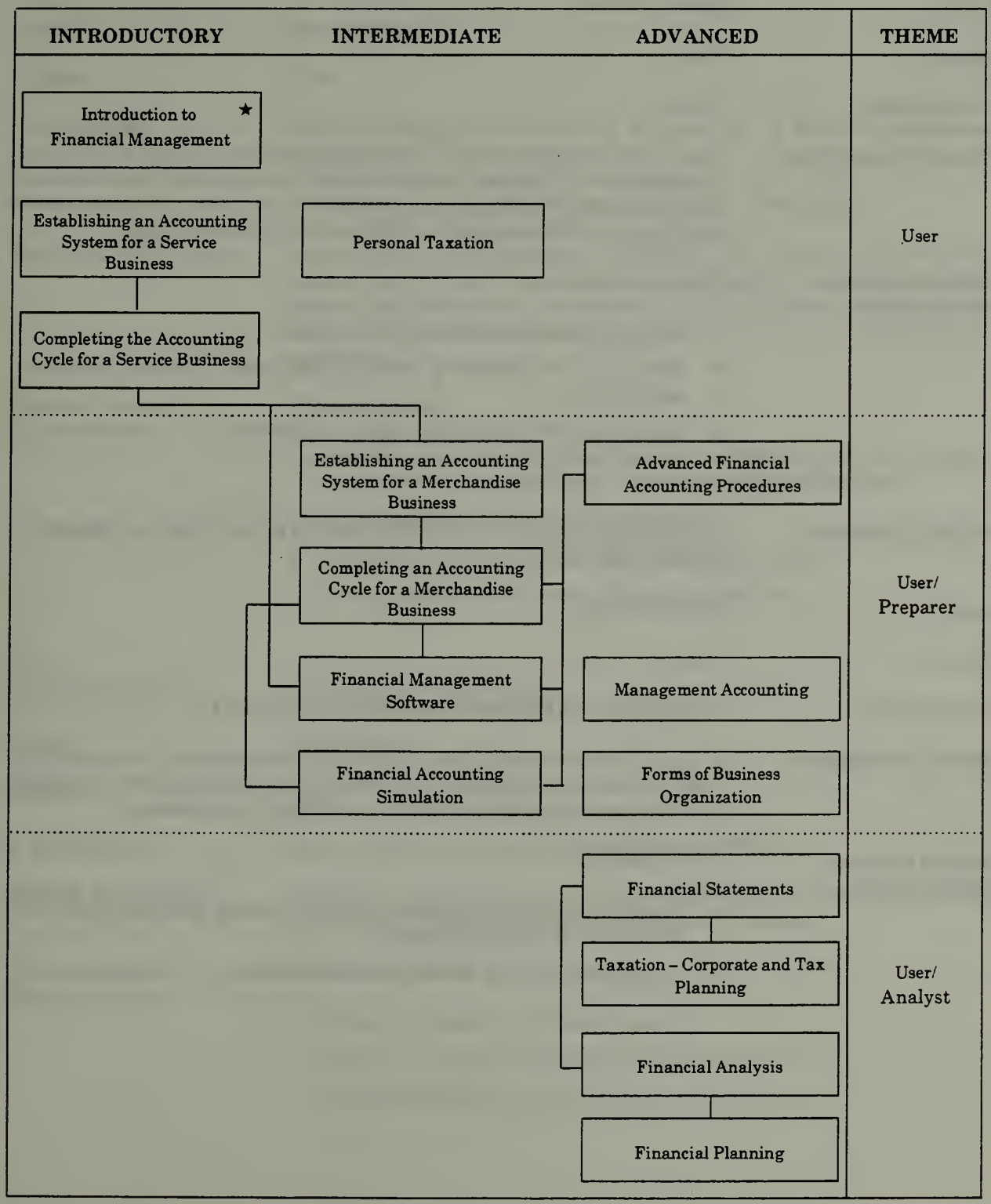
The Financial Management strand will provide an opportunity for students to learn about the development and use of financial information, and to apply this information within the context of business and personal life. The field of Financial Management offers many occupational opportunities.

Within the philosophy of CTS, students in Financial Management *will*:

- develop an appreciation of ethics in personal and business financial management
- develop an awareness of the impact of the economy on self, society and the workplace
- develop basic knowledge, skills, and attitudes that have specific applications to financial management and broad career applications to the world of work
- develop an awareness of realistic career choices related to personal interests, abilities and aptitudes, and recognize the need for life-long learning
- develop skills including decision making, problem solving and communicating, which demonstrate initiative, creativity and flexibility within a rapidly changing financial environment
- use information and technology effectively and efficiently
- link knowledge, skills and attitudes developed in Financial Management to other curricular areas
- demonstrate the ability to work cooperatively with others
- use community and business partnerships to relate and apply theory to realistic situations
- demonstrate mastery of basic competency skills.

CSB: 94 05 31

SCOPE AND SEQUENCE — FINANCIAL MANAGEMENT



—— Prerequisite ---- Recommended prerequisite or corequisite

★ Prerequisite to all modules in this strand.

MODULE FIN101: **INTRODUCTION TO FINANCIAL MANAGEMENT**

Level: **Introductory**

Theme: **User**

Prerequisite: **None**

Module Description: This overview module forms the basis for all other modules in Financial Management. Concepts include ethics, the economic environment, acquiring and using financial resources and the effects of government legislation on the finances of an individual and a small business.

Module Learner Expectations: *The student will:*

- recognize the importance of ethical conduct
- develop an awareness of personal and small business financial management
- demonstrate effort to develop basic competencies.

MODULE FIN102: **ESTABLISHING AN ACCOUNTING SYSTEM FOR A SERVICE BUSINESS**

Level: **Introductory**

Theme: **User**

Prerequisite: **Introduction to Financial Management (FIN101)**

Module Description: A manual hands-on approach introduces the student to the accounting cycle. Students establish a set of books and record business transactions. Terminology unique to financial accounting will be introduced.

Module Learner Expectations: *The student will:*

- identify and apply the steps in the accounting cycle for a service business up to the trial balance
- demonstrate effort to develop basic competencies.

MODULE FIN103: **COMPLETING THE ACCOUNTING CYCLE FOR A SERVICE BUSINESS**

Level: **Introductory**

Theme: **User**

Prerequisite: **Establishing an Accounting System for a Service Business (FIN102)**

Recommended: **One spreadsheet module from Information Processing**

Module Description: This module is a continuation of FIN102. The student completes the accounting cycle and prepares financial statements and a budget. The student also develops an awareness of the many career challenges and opportunities that may be found within the financial management profession.

Module Learner Expectations: *The student will:*

- identify and apply the steps in the accounting cycle for a service business from the worksheet to the post-closing trial balance
- recognize the need for preparing budgets
- examine careers in the financial management field
- demonstrate effort to develop basic competencies.

MODULE FIN201: **PERSONAL TAXATION**

Level: **Intermediate**

Theme: **User**

Prerequisite: **Introduction to Financial Management (FIN101)**

Module Description: Students are introduced to the Canadian income tax system through the preparation of a variety of personal income tax returns.

Module Learner Expectations: *The student will:*

- define the Canadian concept of taxation
- apply the concepts by preparing income tax returns
- demonstrate effort to improve basic competencies.

MODULE FIN202: **ESTABLISHING AN ACCOUNTING SYSTEM FOR A MERCHANDISING BUSINESS**

Level: **Intermediate**

Theme: **User/Preparer**

Prerequisite: **Completing the Accounting Cycle for a Service Business (FIN103)**

Module Description: Students address specialized financial accounting procedures involved in the buying and selling of goods in a retail system, as well as establishing and operating a payroll system.

Module Learner Expectations: *The student will:*

- adapt and use accounting procedures associated with the buying and selling of merchandise
- prepare a payroll
- demonstrate effort to improve basic competencies.

MODULE FIN203: **COMPLETING AN ACCOUNTING CYCLE FOR A MERCHANDISING BUSINESS**

Level: **Intermediate**

Theme: **User/Preparer**

Prerequisite: **Establishing an Accounting System for a Merchandising Business (FIN202)**

Module Description: Students continue and complete the accounting cycle established in FIN202 and prepare financial statements.

Module Learner Expectations: *The student will:*

- finalize the steps in the accounting cycle, using information from FIN202 to complete the worksheet through to the post-closing trial balance
- demonstrate effort to improve basic competencies.

MODULE FIN204: **FINANCIAL MANAGEMENT SOFTWARE**

Level: **Intermediate**

Theme: **User/Preparer**

Prerequisite: **Completing an Accounting Cycle for a Service Business (FIN103)**

Recommended: **Completing an Accounting Cycle for a Merchandising Business (FIN203) Workstation Operation (FIN101)**

Module Description: Students have the opportunity to use an accounting software package that is used in business.

Module Learner Expectations: *The student will:*

- demonstrate efficient use of designated small business accounting software
- demonstrate appropriate workstation management procedures
- demonstrate effort to improve basic competencies.

MODULE FIN205: **FINANCIAL ACCOUNTING SIMULATION**

Level: **Intermediate**

Theme: **User/Analyst**

Prerequisite: **Completing an Accounting Cycle for a Merchandising Business (FIN203)**

Module Description: This module consists of a manual simulation(s) and may include a computer simulation. The simulation may be based on the records of a service business and/or of a partnership. Students have an opportunity to apply accounting principles to realistic business situations.

Module Learner Expectations: *The student will:*

- apply accounting principles to realistic business situations
- demonstrate effort to improve basic competencies.

MODULE FIN301: **ADVANCED FINANCIAL ACCOUNTING PROCEDURES**

Level: **Advanced**

Theme: **User/Preparer**

Prerequisite: **Completing an Accounting Cycle for a Merchandising Business (FIN203)**

Module Description: Students are introduced to advanced accounting procedures used by a variety of businesses, including capital cost allowances, bad debts, and the value of inventory. Students prepare adjustments using the accrual method of accounting and a bank reconciliation, and will complete one of the following concepts: manufacturing, departmental accounting or contract bids.

Module Learner Expectations: *The student will*:

- define terms relevant to capital assets, uncollectible accounts, accruals, inventory, owner's equity, contract bids, manufacturing and departmental accounting
- apply advanced accounting procedures that relate the above terms to realistic business situations
- demonstrate effort to refine basic competencies.

MODULE FIN302: **MANAGEMENT ACCOUNTING**

Level: **Advanced**

Theme: **User/Preparer**

Prerequisite: **Introduction to Financial Management (FIN101)**

Module Description: Students are introduced to management accounting, which involves optimizing capital assets for maximum return of investment. Students examine various internal systems used to safeguard business assets.

Module Learner Expectations: *The student will*:

- assess organizational assets to optimize use
- examine internal controls to safeguard organizational assets
- demonstrate effort to refine basic competencies.

MODULE FIN303: **FORMS OF BUSINESS ORGANIZATION**

Level: **Advanced**

Theme: **User/Analyst**

Prerequisite: **Introduction to Financial Management (FIN101)**

Module Description: Students focus on the organizational and legal differences related to proprietorships, partnerships, corporations and other entities. The module highlights the effect the different forms of business ownership have on the equity section of the balance sheet.

Module Learner Expectations:

The student will:

- describe the organizational and legal differences among various forms of business organization
- explain the advantages and disadvantages of various forms of business organization
- prepare Statement of Equity for different forms of business organization
- demonstrate effort to refine basic competencies.

MODULE FIN304: **FINANCIAL STATEMENTS**

Level: **Advanced**

Theme: **User/Analyst**

Prerequisite: **Introduction to Financial Management (FIN101)**

Module Description: Students examine the content and structure of financial statements, and prepare customized financial statements for a variety of businesses.

Module Learner Expectations:

The student will:

- explain how a balance sheet reflects the financial position of a business on a specific date
- explain how the income statement reflects the financial operations of a business for a specific period of time
- adapt the financial statements to various types of businesses
- demonstrate effort to refine basic competencies.

MODULE FIN305: **TAXATION - CORPORATE AND TAX PLANNING**

Level: **Advanced**

Theme: **User/Analyst**

Prerequisite: **Financial Statements (FIN304)**

Module Description: Students prepare the tax forms for a corporation and for non-profit organizations that are required by different levels of government. The importance of tax planning is emphasized as a strategy to reduce taxes.

Module Learner Expectations: *The student will:*

- apply taxation regulations
- identify tax planning procedures
- demonstrate effort to refine basic competencies.

MODULE FIN306: **FINANCIAL ANALYSIS**

Level: **Advanced**

Theme: **User/Analyst**

Prerequisite: **Financial Statements (FIN304)**

Module Description: Financial analysis involves the interpretation of financial statements. Students use formulas and ratios to evaluate the financial status of business organizations. Interpretation of data, reporting and decision making to recommend change are also addressed.

Module Learner Expectations: *The student will:*

- recognize the importance of using appropriate data for reporting and decision making
- interpret data obtained to recommend action
- demonstrate effort to refine basic competencies.

MODULE FIN307: **FINANCIAL PLANNING**

Level: **Advanced**

Theme: **User/Analyst**

Prerequisite: **Financial Analysis (FIN306)**

Module Description: Students are introduced to the value of financial planning for a business. They explore the impact of economic trends, changing world markets and tax implications, all of which must be considered when preparing financial forecasts. The concept of market research is also discussed.

Module Learner Expectations: *The student will:*

- explain the value of financial planning
- design a forecast that incorporates economic trends and world markets
- demonstrate effort to refine basic competencies.

FOODS

STRAND RATIONALE

Food is one of our most basic personal needs. In addition, foods play a major role in our family, community and careers. In a constantly changing society, our foods needs will be met in increasingly varied ways.

Aside from its essential role in nutrition, food plays a very important role in the provincial and national economies. In Alberta, the agriculture and food industry, which provides quality food for people in the province and around the world, is a major force in the economy. One of every three jobs in Alberta is related to the agriculture and food industry.

An important part of the food industry in Canada is the food services industry, which employs over 600,000 people; this number is expected to rise to almost 800,000 by the year 2000. Occupations in this industry vary widely, as do educational or training requirements. The industry relies on a plentiful supply of young people to meet its staffing needs. Nearly 50 per cent of all individuals working in all food and beverage preparation and related occupations are between the ages of 15 to 24 years. About 30 per cent of the adult population in Canada has spent at least some time working in the food services industry.

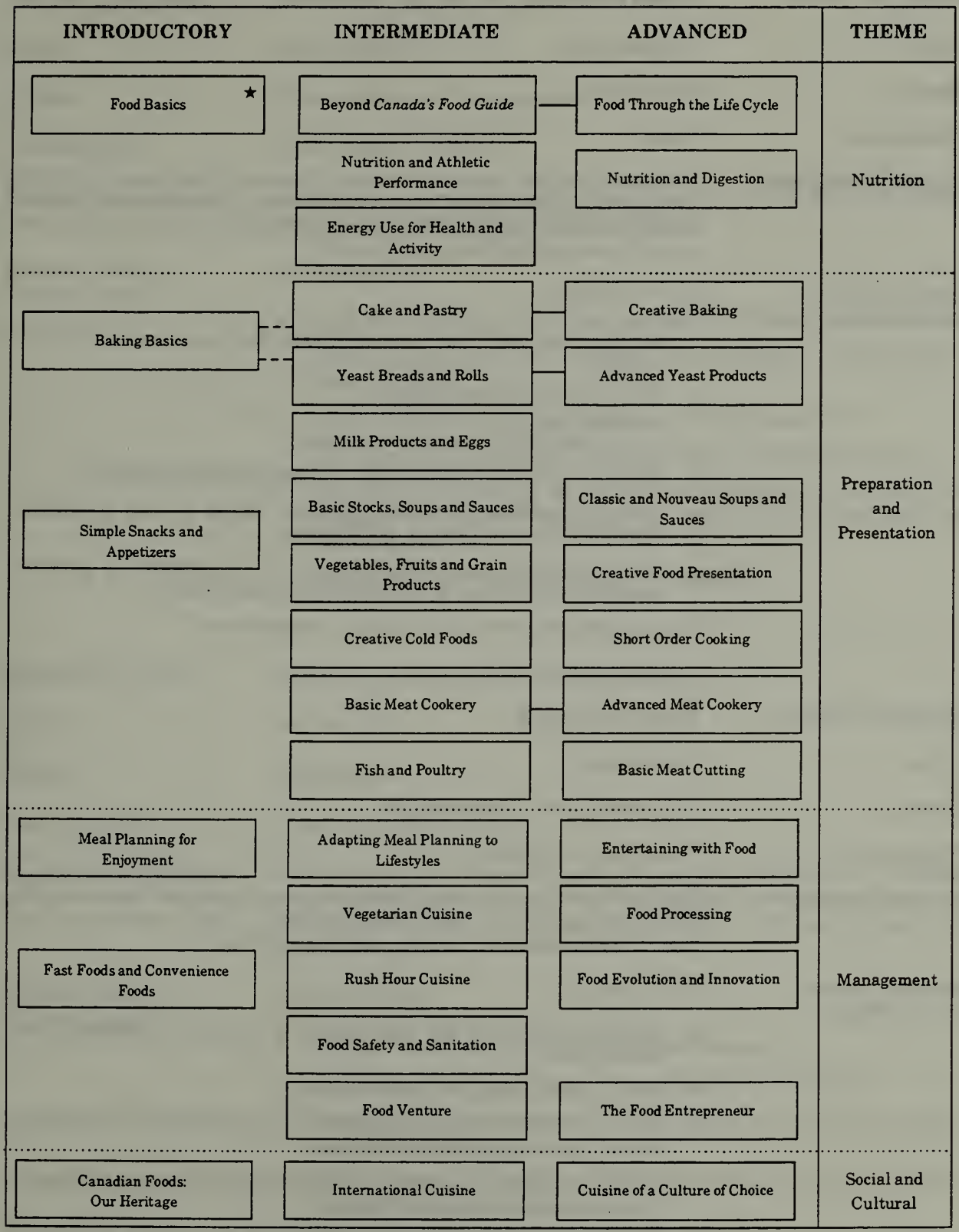
By developing basic, integrating and career-specific knowledge, skills and attitudes in the context of foods, students will have the ability to adapt to the challenges of change with increased flexibility and confidence. The Foods strand, using the student-centered process approach, combines thinking processes and concrete experience in as realistic an environment as possible, whether that be in the context of the individual, family or the workplace.

Within the philosophy of Career and Technology Studies (CTS), students in Foods *will*:

- develop an interest in the broad base of food in such a way that they are motivated to continue practising and learning about foods
- develop an awareness of the nutritional importance of food and its role in physical maintenance and wellness
- develop basic knowledge, skills and attitudes through the preparation of a variety of foods in order to lead richer and more fulfilled lives or to enter the food service industry with increased confidence and success
- practise safe and sanitary food handling and realize the consequences of failing to do so
- foster an understanding and knowledge of the multicultural richness and varied social customs in the preparation and the sharing of food
- develop management skills in the selection, preparation and service of food, and assess the impact these decisions might have on the global community.

CSB: 94 05 31

SCOPE AND SEQUENCE — FOODS



—— Prerequisite ---- Recommended prerequisite or corequisite

★ Prerequisite to all modules in this strand.

MODULE FOD101: **FOOD BASICS**

Level: **Introductory**

Theme: **Nutrition**

Prerequisite: **None**

Module Description: We know that "You are what you eat!" *Canada's Food Guide to Healthy Eating* assists you to make wise food choices. Success preparing food depends on understanding recipes and equipment, care in handling food, as well as safe and efficient work habits.

Module Learner Expectations: *The student will:*

- analyze *Canada's Food Guide to Healthy Eating* as the basis for food choices
- demonstrate understanding of:
  - food safety
  - safe handling of tools and equipment
- demonstrate working knowledge of a food preparation facility
- apply knowledge and management skills in the planning, preparation and evaluation of basic foods
- assess in the context of Food Basics the components of personal adaptability that may be significant for career choices
- demonstrate effort to develop basic competencies.

MODULE FOD102: **BAKING BASICS**

Level: **Introductory**

Theme: **Preparation and Presentation**

Prerequisite: **Food Basics (FOD101)**

Module Description: Delicious cookies, cakes, muffins and puddings begin with understanding the ingredients from which they are made. Skill combining these ingredients transforms them into the baker's pride!

Module Learner Expectations: *The student will:*

- describe the role of key ingredients in cookies, quickbreads and butter cakes
- demonstrate costing of a baked product
- employ correct preparation methods in the production of a variety of cookies, quickbreads and butter cakes
- prepare a variety of puddings, custards, gelatin desserts and crumb crusts using appropriate techniques
- assess in the context of Baking Basics the components of personal adaptability which may be significant for career choices
- demonstrate effort to develop basic competencies.

MODULE FOD103: **SIMPLE SNACKS AND APPETIZERS**

Level: **Introductory**

Theme: **Preparation and Presentation**

Prerequisite: **Food Basics (FOD101)**

Module Description: Snacking is an important part of the way we eat. We can make many snacks that are both delicious and nutritious.

Module Learner Expectations:

The student will:

- analyze snacking habits, discussing factors that affect snack choices
- examine how snacks may contribute to *Canada's Food Guide to Healthy Eating*
- select, prepare and compare various snacks and appetizers
- make personal decisions on the suitability of a variety of snacks
- assess in the context of Simple Snacks and Appetizers the components of personal adaptability that may be significant for career choices
- demonstrate effort to develop basic competencies.

MODULE FOD104: **MEAL PLANNING FOR ENJOYMENT**

Level: **Introductory**

Theme: **Management**

Prerequisite: **Food Basics (FOD101)**

Module Description: A meal can let you be creative and enjoy eating with others, or it might simply satisfy your need to eat before you get on with your day. In planning and preparing successful meals you must understand your needs at the time.

Module Learner Expectations:

The student will:

- analyze factors influencing the reasons for eating
- explain factors that contribute to successful meal planning
- demonstrate the importance of consumer skills in selection of foods for meal planning
- plan and prepare healthy meals for varying lifestyles, available resources and special occasions
- assess in the context of meal planning those components of personal adaptability which may be significant for career choices
- demonstrate effort to develop basic competencies.

MODULE FOD105: **FAST FOODS AND CONVENIENCE FOODS**

Level: **Introductory**

Theme: **Management**

Prerequisite: **Food Basics (FOD101)**

Module Description: We can buy fast foods, or we can prepare them using convenience foods. Considering nutrition, cost, time, quality of food and alternatives will help make good choices.

Module Learner Expectations: *The student will:*

- discuss the variety and availability of fast foods and convenience foods
- prepare various fast foods and simple convenience foods
- analyze decisions and evaluate food choices relating to fast foods and convenience foods
- assess in the context of Fast Foods and Convenience Foods the components of personal adaptability that may be significant for career choices
- demonstrate effort to develop basic competencies.

MODULE FOD106: **CANADIAN FOODS: OUR HERITAGE**

Level: **Introductory**

Theme: **Social and Cultural**

Prerequisite: **Food Basics (FOD101)**

Module Description: Food in Canada today reflects both the country's history and the many ethnic groups that brought their rich cultural traditions when they immigrated here. Awareness of the roots of our food heritage helps us to understand ourselves.

Module Learner Expectations: *The student will:*

- examine ethnic influences on food and food patterns within the community
- examine the significance of food patterns and food customs in Canada's past
- prepare and analyze ethnic foods
- demonstrate, compare and assess historical methods for acquisition, preparation and storage of food
- assess in the context of Canadian and cultural foods the components of personal adaptability that may be significant for career choices
- demonstrate effort to develop basic competencies.

MODULE FOD201: **BEYOND CANADA'S FOOD GUIDE**

Level: **Intermediate**

Theme: **Nutrition**

Prerequisite: **Food Basics (FOD101)**

Module Description: Learn which foods are crucial for wellness: how foods affect your performance now and your health in the future. Discover how to choose and prepare great tasting and nutritious foods.

Module Learner Expectations: *The student will:*

- identify the interrelationships between food choices, nutrients and wellness
- examine the importance of high fibre and lower fat diets in ensuring wellness
- evaluate nutrition information
- prepare, compare and analyze a wide variety of foods in order to increase the acceptability of high quality nutritional foods in the diet
- assess in the context of nutrition the components of personal adaptability that may be significant for career choices
- demonstrate effort to improve basic competencies.

MODULE FOD202: **NUTRITION AND ATHLETIC PERFORMANCE**

Level: **Intermediate**

Theme: **Nutrition**

Prerequisite: **Food Basics (FOD101)**

Module Description: Athletes working to improve their performance need to know how eating can be part of the edge they seek. Whether it's during training, or the pre-competition meal, students will learn to prepare food for the athlete's needs.

Module Learner Expectations: *The student will:*

- examine the role of food and nutrients in athletic performance
- develop strategies for achieving optimal nutrition for the athlete
- evaluate nutrition information and misinformation directed to the athlete
- select, prepare and evaluate foods that will meet the athlete's needs
- assess in the context of nutrition for athletes the components of personal adaptability that may be significant for career choices
- demonstrate effort to improve basic competencies.

MODULE FOD203: **ENERGY USE FOR HEALTH AND ACTIVITY**

Level: **Intermediate**

Theme: **Nutrition**

Prerequisite: **Food Basics (FOD101)**

Module Description: Some people want to gain weight while others wish they could lose. There are plenty of methods for achieving either goal, but are they effective? Learn how to make wise choices about food and activity. Learn how to prepare foods that will help your body be the best it can be!

Module Learner Expectations: *The student will:*

- examine the relationship between body image, body composition, wellness and eating disorders
- develop strategies for achieving and maintaining healthy body composition
- evaluate diets, diet aids and support groups
- select, prepare and evaluate foods to develop a repertoire of foods suitable for achieving and maintaining weight loss or weight gain
- assess in the context of Energy Use for Health and Activity the components of personal adaptability that may be significant for career choices
- demonstrate effort to improve basic competencies.

MODULE FOD204: **CAKE AND PASTRY**

Level: **Intermediate**

Theme: **Preparation and Presentation**

Prerequisite: **Baking Basics (FOD102)**

Module Description: Canadian cuisine, whether for special occasions, holidays or meals, may be enhanced by cakes and pastries. Students will expand their knowledge and skills in the production of cake and pastry.

Module Learner Expectations: *The student will:*

- discuss the role of cakes and pastries in Canadian cuisine, considering nutrition, cultural and social traditions
- compare the function of ingredients in the production of cakes and pastries
- prepare and evaluate cakes and pastries, demonstrating conventional techniques
- demonstrate skill decorating cakes and pastries using a variety of icings and frostings
- assess in the context of baking cakes and pastries, those components of personal adaptability that may be significant for career choices
- demonstrate effort to improve basic competencies.

MODULE FOD205: **YEAST BREADS AND ROLLS**

Level: **Intermediate**

Theme: **Preparation and Presentation**

Prerequisite: **Baking Basics (FOD102)**

Module Description: As if by magic, yeast and the baker's skill can transform simple ingredients into mouth-watering works of art. An amazing variety of breads and buns may be produced when students understand the ingredients and the specialized skills used in working with yeast.

Module Learner Expectations: *The student will:*

- demonstrate an understanding of yeast and the steps involved in the preparation of a variety of yeast products
- demonstrate the skills necessary for the production of varied yeast products
- assess in the context of baking yeast products the components of personal adaptability that may be significant for career choices
- demonstrate effort to improve basic competencies.

MODULE FOD206: **MILK PRODUCTS AND EGGS**

Level: **Intermediate**

Theme: **Preparation and Presentation**

Prerequisite: **Food Basics (FOD101)**

Module Description: Milk products and eggs are among our most widely used foods. It is important to develop your skills with them and to understand the various products available, what they contribute to cooked foods and how they are best used.

Module Learner Expectations: *The student will:*

- compare various milk products considering nutritive value, processing and handling
- describe the nutritive value, grading and handling of eggs
- compare the role of eggs in various cooking applications
- apply the principles of milk products cookery in the preparation of varied products
- demonstrate varied methods of cooking eggs and cooking with eggs
- assess in the context of Milk Products and Eggs the components of personal adaptability that may be significant for career choices
- demonstrate effort to improve basic competencies.

MODULE FOD207: **BASIC STOCKS, SOUPS AND SAUCES**

Level: **Intermediate**

Theme: **Preparation and Presentation**

Prerequisite: **Food Basics (FOD101)**

Module Description: Light nutritional broths and soups begin with wholesome rich stocks. When stocks are combined with various thickening agents, hearty soups and foundation sauces are created. Students will add skills in producing basic stocks, soups and sauces to their portfolio.

Module Learner Expectations: *The student will:*

- identify ingredients used in the preparation of white and brown stocks
- describe key thickening and flavouring agents in the production of sauces and soups
- demonstrate correct techniques in the preparation and safe handling of white and brown stocks
- prepare and evaluate clear and cream soups and foundation sauces
- assess in the context of Basic Stocks, Soups and Sauces the components of personal adaptability that may be significant for career choices
- demonstrate effort to improve basic competencies.

MODULE FOD208: **VEGETABLES, FRUITS AND GRAIN PRODUCTS**

Level: **Intermediate**

Theme: **Preparation and Presentation**

Prerequisite: **Food Basics (FOD101)**

Module Description: The incredible variety of grain products and vegetables and fruits available to us are important for their nutritional value and the variety they add to our meals and menus. Learn how to preserve the quality of these foods as you prepare vegetables, fruits and grain products.

Module Learner Expectations: *The student will:*

- demonstrate knowledge of vegetables, fruits and grain products in terms of:
  - variety of types and forms
  - care, handling and storage
  - nutritional value
  - rationale, methods and effect of cooking
- prepare and evaluate vegetables, fruits and grain products using a variety of cooking methods

- assess in the context of Vegetables, Fruits and Grain Products the components of personal adaptability that may be significant for career choices
- demonstrate effort to improve basic competencies.

MODULE FOD209: **CREATIVE COLD FOODS**

Level: **Intermediate**

Theme: **Preparation and Presentation**

Prerequisite: **Food Basics (FOD101)**

Module Description: The preparation of cold foods today reflects influences from around the world and our desire for healthier eating. Learn to combine creativity and understanding of nutrition in the preparation of salads and sandwiches.

Module Learner Expectations: *The student will*:

- demonstrate knowledge of salad, salad dressing and sandwich ingredients in terms of:
  - types
  - availability
  - handling
  - nutritional value and nutrition concerns
- compare the various roles that salads may play in a meal or menu
- prepare a variety of salads, salad dressings and sandwiches employing diverse ingredients
- assess in the context of Creative Cold Foods the components of personal adaptability that may be significant for career choices
- demonstrate effort to improve basic competencies.

MODULE FOD210: **BASIC MEAT COOKERY**

Level: **Intermediate**

Theme: **Preparation and Presentation**

Prerequisite: **Food Basics (FOD101)**

Module Description: Every cut of meat can be tender and delicious if the differences between cuts of meat, tenderizing and cooking methods are understood. Since meats are an important and costly part of meals, these are critical skills to develop.

Module Learner Expectations: *The student will*:

- explain the importance of inspection and grading of meats to the consumer

- explain the factors that affect the tenderness of meat, both before and as a result of cooking
- select appropriate cooking methods for a wide variety of cuts of meat
- prepare and evaluate various cuts of meat, employing moist and dry heat cooking methods
- demonstrate safe practices in the handling and preparation of meats
- assess in the context of Basic Meat Cookery the components of personal adaptability that may be significant for career choices
- demonstrate effort to improve basic competencies.

MODULE FOD211: **FISH AND POULTRY**

Level: **Intermediate**

Theme: **Preparation and Presentation**

Prerequisite: **Food Basics (FOD101)**

Module Description: Fish and poultry are enjoyed for their nutritional value and the delicious variety they add to meals and menus. Many new skills are developed as the student learns to select, handle and prepare them.

Module Learner Expectations: *The student will:*

- demonstrate knowledge of the variety of fish and poultry products available considering:
  - types, forms and grades
  - nutritional value
  - rationale, methods and effect of cooking
- explain the rationale for safe handling and appropriate storage of fish and poultry
- demonstrate the safe handling and appropriate storage of fish and poultry
- prepare and evaluate a variety of fish and poultry using appropriate cooking methods
- demonstrate boning, filleting, carving, finishing and presentation techniques with a variety of fish and poultry
- assess in the context of Fish and Poultry the components of personal adaptability that may be significant for career choices
- demonstrate effort to improve basic competencies.

MODULE FOD212: **ADAPTING MEAL PLANNING TO LIFESTYLES**

Level: **Intermediate**

Theme: **Management**

Prerequisite: **Food Basics (FOD101)**

Module Description: Busy schedules and strained budgets are just two of many challenges that face us when we plan meals. Learn strategies for creating satisfying meals, no matter what the circumstances are!

Module Learner Expectations: *The student will:*

- assess the impact of evolving eating trends on individuals, families and the community
- develop strategies for food planning to satisfy the needs of individuals and families from a variety of circumstances
- plan, prepare and evaluate foods and meals to meet the needs of individuals and families from a variety of circumstances
- assess in the context of Adapting Meal Planning to Lifestyles the components of personal adaptability that may be significant for career choices
- demonstrate effort to improve basic competencies.

MODULE FOD213: **VEGETARIAN CUISINE**

Level: **Intermediate**

Theme: **Management**

Prerequisite: **Food Basics (FOD101)**

Module Description: A vegetarian diet can be very wholesome, but it requires more than eliminating meats, or even all animal products, from the diet. Learn how to choose foods and some great new ways to prepare them to create a healthy vegetarian diet.

Module Learner Expectations: *The student will:*

- examine the rationale for various vegetarian eating patterns
- distinguish the critical nutritional elements of wholesome vegetarian eating
- evaluate foods and develop meal plans suitable for vegetarian eating patterns
- plan, prepare and present foods within the context of vegetarian meal planning
- assess in the context of Vegetarian Cuisine the components of personal adaptability that may be significant for career choices
- demonstrate effort to improve basic competencies.

MODULE FOD214: **RUSH HOUR CUISINE**

Level: **Intermediate**

Theme: **Management**

Prerequisite: **Food Basics (FOD101)**

Module Description: Too little time or energy to cook? Learn unique ways to create delicious and nutritious dishes quickly and easily from simple ingredients and prepared and convenience foods.

Module Learner Expectations: *The student will:*

- evaluate the influence of lifestyle and resources on the provision of nutritious and satisfying foods
- investigate and evaluate alternatives to enhance the ease and speed of food preparation
- adapt, prepare and evaluate foods to enhance ease and speed of preparation
- develop creativity and flair in presentation of foods
- assess in the context of Rush Hour Cuisine the components of personal adaptability that may be significant for career choices
- demonstrate effort to improve basic competencies.

MODULE FOD215: **FOOD SAFETY AND SANITATION**

Level: **Intermediate**

Theme: **Management**

Prerequisite: **Food Basics (FOD101)**

Module Description: Food-borne illness is a concern whenever food is handled. Food safety and sanitation training is essential in occupations dealing with food: success in this module will be a definite asset for the student's résumé.

Module Learner Expectations: *The student will:*

- demonstrate understanding of the relationship between foods, micro-organisms and food-borne illness
- explain measures to prevent food contamination and to control the growth of micro-organisms in food
- examine the role of regulatory agencies and safety programs such as WHMIS in maintaining a safe and sanitary environment
- demonstrate the purchasing, management, production and/or presentation of safe wholesome food consistent with Section 43 of the *Public Health Act* Food Regulation
- assess in the context of Food Safety and Sanitation the components of personal adaptability that may be significant for career choices
- demonstrate effort to improve basic competencies.

MODULE FOD216: **FOOD VENTURE**

Level: **Intermediate**

Theme: **Management**

Prerequisite: **Food Basics (FOD101)**

Module Description: Food is a great way to satisfy the customer's needs! Learn how by joining the "food venture". (For students with entrepreneurial spirit!)

Module Learner Expectations:

The student will:

- demonstrate food safety knowledge, skills and attitudes for the preparation and service of appropriate foods for an identified clientele
- develop and implement a business plan for a food venture
- test, prepare, produce and evaluate food for a food venture
- assess in the context of a food venture the components of personal adaptability that may be significant for career choices
- demonstrate effort to improve basic competencies.

MODULE FOD217: **INTERNATIONAL CUISINE**

Level: **Intermediate**

Theme: **Social and Cultural**

Prerequisite: **Food Basics (FOD101)**

Module Description: Cultures reveal themselves through their foods and their food customs. Discover other cultures by exploring their cuisine. Learn a variety of international cooking techniques, use specialized tools; prepare food for a typical day, or for a festival!

Module Learner Expectations:

The student will:

- examine the relationship of food to culture
- compare cultures through examination of the role of food in a variety of cultures
- plan, prepare, present and evaluate foods representative of a variety of cultures
- assess in the context of International Cuisine the components of personal adaptability that may be significant for career choices
- demonstrate effort to improve basic competencies.

MODULE FOD301: **FOOD THROUGH THE LIFE CYCLE**

Level: **Advanced**

Theme: **Nutrition**

Prerequisite: **Beyond Canada's Food Guide (FOD201)**

Module Description: Throughout our life cycle food plays an important role in our physical, emotional and social well-being. Understanding how our needs change helps us meet the challenges of each stage in the life cycle. Learn preparation techniques and develop skills for adapting foods to satisfy all ages.

Module Learner Expectations: *The student will:*

- examine the role food plays in the development, enhancement and maintenance of physical, emotional and social wellness throughout the life cycle and for individuals with special needs
- prepare and evaluate foods for the enhancement of wellness throughout the life cycle
- evaluate community nutrition programs
- assess in the context of Food Through the Life Cycle the components of personal adaptability and labour market dynamics that may be significant for career choices
- demonstrate effort to refine basic competencies.

MODULE FOD302: **NUTRITION AND DIGESTION**

Level: **Advanced**

Theme: **Nutrition**

Prerequisite: **Beyond Canada's Food Guide (FOD201)**

Module Description: Through an understanding of nutrition and how our bodies process food, students examine current nutritional theories/issues and dietary needs.

Module Learner Expectations: *The student will:*

- integrate knowledge of nutrients with understanding of the processes of digestion, absorption and metabolism
- examine the role of water, minor vitamins and minerals in achieving and maintaining wellness
- relate nutrient intake, food patterns and diet therapies with prevention and management of disease
- evaluate current nutrition controversies

- plan (and/or prepare) and evaluate foods and meal plans for nutrient composition
- assess in the context of Nutrition and Digestion the components of adaptability and work dynamics that may be significant for career choices
- demonstrate effort to refine basic competencies.

MODULE FOD303: **CREATIVE BAKING**

Level: **Advanced**

Theme: **Preparation and Presentation**

Prerequisite: **Cake and Pastry (FOD204)**

Module Description: Satisfaction and pride are two rewards for the creative baker as he or she learns to create specialty cakes and pastry products. Students will select and execute a major project, such as a gingerbread house or a wedding cake.

Module Learner Expectations: *The student will:*

- prepare a variety of specialty cakes, pastries and yeast goods, which emphasizes refinement of baking skills and knowledge
- prepare various specialty desserts, representative of the world's great cuisines
- develop creativity and flair in the presentation of specialty baked products
- plan and execute one or more major projects within the context of creative baking
- assess in the context of Creative Baking the components of personal adaptability and labour market dynamics that may be significant for career choices
- demonstrate effort to refine basic competencies.

MODULE FOD304: **ADVANCED YEAST PRODUCTS**

Level: **Advanced**

Theme: **Preparation and Presentation**

Prerequisite: **Yeast Breads and Rolls (FOD205)**

Module Description: Preparation of braided breads, fancy dinner rolls, doughnuts, croissants and danishes develops more skill handling yeast doughs. Consistency in product quality is emphasized in this module.

Module Learner Expectations:

The student will:

- practise and refine knowledge and skills necessary for the production of a variety of advanced yeast products
- explore multicultural influences on yeast products by researching and preparing products representative of several of the world's cuisines
- develop consistency in the production of various advanced yeast products
- assess in the context of Advanced Yeast Products the components of personal adaptability and labour market dynamics that may be significant for career choices
- demonstrate effort to refine basic competencies.

MODULE FOD305: **CLASSIC AND NOUVEAU SOUPS AND SAUCES**

Level: **Advanced**

Theme: **Preparation and Presentation**

Prerequisite: **Basic Stocks, Soups and Sauces (FOD207)**

Module Description: A host of sublime sauces and soups are revered throughout the world by chefs and diners alike. Techniques and ingredients of classic cuisine have been adapted in the trend to lighter eating and nouveau cuisine. Experience in the preparation of soups and sauces is fundamental for the cook and the saucier.

Module Learner Expectations:

The student will:

- demonstrate knowledge of ingredients and techniques for the production of a complete repertoire of soups, the foundation sauces and their derivatives
- analyze how various adaptations to soups and sauces of classic cuisine satisfy the tastes of the health-conscious consumer
- prepare and evaluate a complete repertoire of soups, the foundation sauces and their derivatives
- assess in the context of Classic and Nouveau Soups and Sauces the components of personal adaptability and labour market dynamics that may be significant for career choices
- demonstrate effort to refine basic competencies.

MODULE FOD306: **CREATIVE FOOD PRESENTATION**

Level: **Advanced**

Theme: **Preparation and Presentation**

Prerequisite: **Food Basics (FOD101)**

Module Description: Develop creativity and flair as you learn techniques for presenting beautiful food!

Module Learner Expectations:

The student will:

- demonstrate knowledge of the principles of design and their application to the preparation and presentation of foods
- analyze the costs involved in the presentation of foods
- demonstrate and develop a portfolio of techniques through which food preparation and presentation may be adapted to enhance food and to express creativity
- assess in the context of Creative Food Presentation the components of personal adaptability and labour market dynamics that may be significant for career choices
- demonstrate effort to refine basic competencies.

MODULE FOD307: **SHORT ORDER COOKING**

Level: **Advanced**

Theme: **Preparation and Presentation**

Prerequisite: **Food Basics (FOD101)**

Module Description: Career opportunities are plentiful in today' fast food industry. A foundation in the management skills, preparation and the principles underlying short order cookery may offer a head start to a successful career.

Module Learner Expectations:

The student will:

- demonstrate and apply knowledge of foods prepared, techniques employed, and equipment used in the operation of the short order kitchen
- demonstrate management skills for the safe and efficient operation of the short order kitchen
- demonstrate skills and techniques necessary for preparation and cooking of a large variety of short order items

- assess in the context of Short Order Cooking the components of personal adaptability and labour market dynamics that may be significant for career choices
- demonstrate effort to refine basic competencies.

MODULE FOD308: **ADVANCED MEAT COOKERY**

Level: **Advanced**

Theme: **Preparation and Presentation**

Prerequisite: **Basic Meat Cookery (FOD210)**

Module Description: A rich variety of meat dishes grace the table when the cook develops awareness of meats other than beef and greater understanding of meat cookery.

Module Learner Expectations: *The student will:*

- describe the composition and structure of domestic meat products and select appropriate cooking methods for them
- compare the many variations of moist and dry heat cookery
- prepare and evaluate a wide range of cuts of meat and meat products representative of a cross-section of meat species
- demonstrate multicultural awareness in the preparation and presentation of meat dishes
- assess in the context of Advanced Meat Cookery the components of personal adaptability and work dynamics that may be significant for career choices
- demonstrate effort to refine basic competencies.

MODULE FOD309: **BASIC MEAT CUTTING**

Level: **Advanced**

Theme: **Preparation and Presentation**

Prerequisite: **Food Basics (FOD101)**

Module Description: Meat cutting may be one of the chef's or cook's many talents. On the other hand, skills students gain here may be a stepping-stone to a career in the retail or wholesale meat cutting industry.

Module Learner Expectations:

The student will:

- explain the processing and handling practices in the transformation of the carcass into cuts
- relate the structure of the carcass to wholesale and retail cuts
- demonstrate the correct breakdown of beef, pork, lamb and/or veal carcasses into wholesale and retail cuts
- demonstrate skills in the preparation of meats for cooking
- demonstrate proficient and safe operation of power and hand tools used by the butcher
- practise safe and hygienic meat handling skills and demonstrate proper cleaning and sanitation practices for meat cutting
- assess in the context of Basic Meat Cutting the components of personal adaptability and work dynamics that may be significant for career choices
- demonstrate effort to refine basic competencies.

MODULE FOD310: ENTERTAINING WITH FOOD

Level: **Advanced**

Theme: **Management**

Prerequisite: **Food Basics (FOD101)**

Module Description: Planning and preparing for entertaining can be as much fun as the event itself! Students develop skills that may be used in the hospitality industry, at home or in many other career roles where organization is important.

Module Learner Expectations:

The student will:

- explain and demonstrate safe handling, preparation and presentation of foods to satisfy the demands of various occasions
- analyze the elements of an entertainment event
- organize, implement and evaluate an entertainment event that includes food
- assess in the context of Entertaining with Food the components of personal adaptability and labour market dynamics which may be significant for career choices
- demonstrate effort to refine basic competencies.

MODULE FOD311: **FOOD PROCESSING**

Level: **Advanced**

Theme: **Management**

Prerequisite: **Food Basics (FOD101)**

Module Description: Freezing, pickling, canning, drying, and jam- and jelly-making account for many foods available commercially. As students use these methods to process fresh foods, they explore how technology affects food.

Module Learner Expectations: *The student will:*

- analyze factors affecting food safety and food spoilage in processed foods
- explain the processing of foods by canning, freezing, drying, pickling, and jam- and jelly-making
- evaluate the impact of technological developments on foods and the food supply
- employ basic technology in the processing and preservation of a wide variety of foods
- assess in the context of Food Processing the components of personal adaptability and work dynamics that may be significant for career choices
- demonstrate effort to refine basic competencies.

MODULE FOD312: **FOOD EVOLUTION AND INNOVATION**

Level: **Advanced**

Theme: **Social and Cultural**

Prerequisite: **Food Basics (FOD101)**

Module Description: From roast mammoth to twinkies! What will we eat after the turn of the century? Explore how food has changed and what that means to the people who eat it. Prepare a wide variety of foods and learn how they came to be.

Module Learner Expectations: *The student will:*

- analyze how the acquisition of food affects the culture and society in which people live
- discuss how food patterns, especially those in Canada, have evolved through the interaction of cultures and people
- identify relationships between consumers, marketplace and technology as food evolves

- investigate factors that will influence the food patterns in the past, present and future
- prepare and evaluate foods demonstrating the evolution of food
- assess in the context of Food Evolution and Innovation the components of personal adaptability and work dynamics that may be significant for career choices
- demonstrate effort to refine basic competencies.

MODULE FOD313: **THE FOOD ENTREPRENEUR**

Level: **Advanced**

Theme: **Management**

Prerequisite: **Managing the Venture (E&I301)**

Module Description: Have you got an idea for a business focusing on food? Here's your chance to see if it will work! Join in the planning, testing and marketing of a food product.

Module Learner Expectations: *The student will*:

- identify and evaluate a variety of food trends
- investigate food ventures within the community
- identify and apply appropriate regulations and procedures for ensuring food safety to implement a particular food venture
- select, plan, prepare and evaluate a food venture
- assess in the context of The Food Entrepreneur the components of personal adaptability and work dynamics that may be significant for career choices
- demonstrate effort to refine basic competencies.

MODULE FOD314: **CUISINE OF A CULTURE OF CHOICE**

Level: **Advanced**

Theme: **Social and Cultural**

Prerequisite: **Food Basics (FOD101)**

Module Description: Explore in depth the cuisine of another country to appreciate the richness of its history and its culture. Discover its foods; experience traditional cooking methods; celebrate a festival and learn about food customs!

Module Learner Expectations: *The student will*:

- explain and analyze the various roles that food plays within a specific culture
- research the cuisine of a particular culture
- plan, prepare, present and evaluate foods and meals representative of the culture
- assess in the context of Cuisine of a Culture of Choice the components of personal adaptability and work dynamics that may be significant for career choices
- demonstrate effort to refine basic competencies.

FORESTRY

STRAND RATIONALE

Forests are a valuable source of natural wealth and cover almost two-thirds of Alberta. The resources found on or beneath these public lands are important to our economic strength and quality of life. Forested lands in Alberta and Canada provide wildlife habitat, vital watersheds, grazing lands, non-renewable resource development sites, outdoor recreation and tourism opportunities, and at the same time support the growth of the forest products industry.

Achieving harmony among these diverse and sometimes competing needs associated with our use of forested lands is a vital and continuous task. Integrated resource management ensures a balanced use of forest resources through public involvement and a team approach.

Recently, public concern for forests at global levels has expanded to embrace practices that ensure sustainable use of forest ecosystems. Sustainable use of our resources and environment today will not damage prospects for their use by future generations.★

Forestry, a strand in Career and Technology Studies, will provide opportunities for students to learn about the dynamics of a forest ecosystem, as well as the many benefits and opportunities associated with forests. Conservation is viewed throughout the strand as a process for managing human use of the forest environment to ensure such use is sustainable. Students will develop practical knowledge of forest industry practices, and explore issues regarding the integrated and sustainable use of forest resources.

Within the philosophy of Career and Technology Studies, students in Forestry will develop the knowledge, skills, attitudes, motivation and commitment to work individually and collectively, as private citizens and members of the work force, toward the conservation and responsible use of water, land, air, forests and wildlife. In order to achieve these competencies, *the student will*:

- develop greater awareness of the economic, environmental and social significance of the forest resource in Alberta and the rest of the world, and the benefits and costs of resource development

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Parks Canada and the Canadian Wildlife Service. *The Nature of Canada: A Primer on Spaces and Species.* Ottawa, ON: Environment Canada, 1993.

- describe relationships among production, processing and marketing systems within our forests products industry

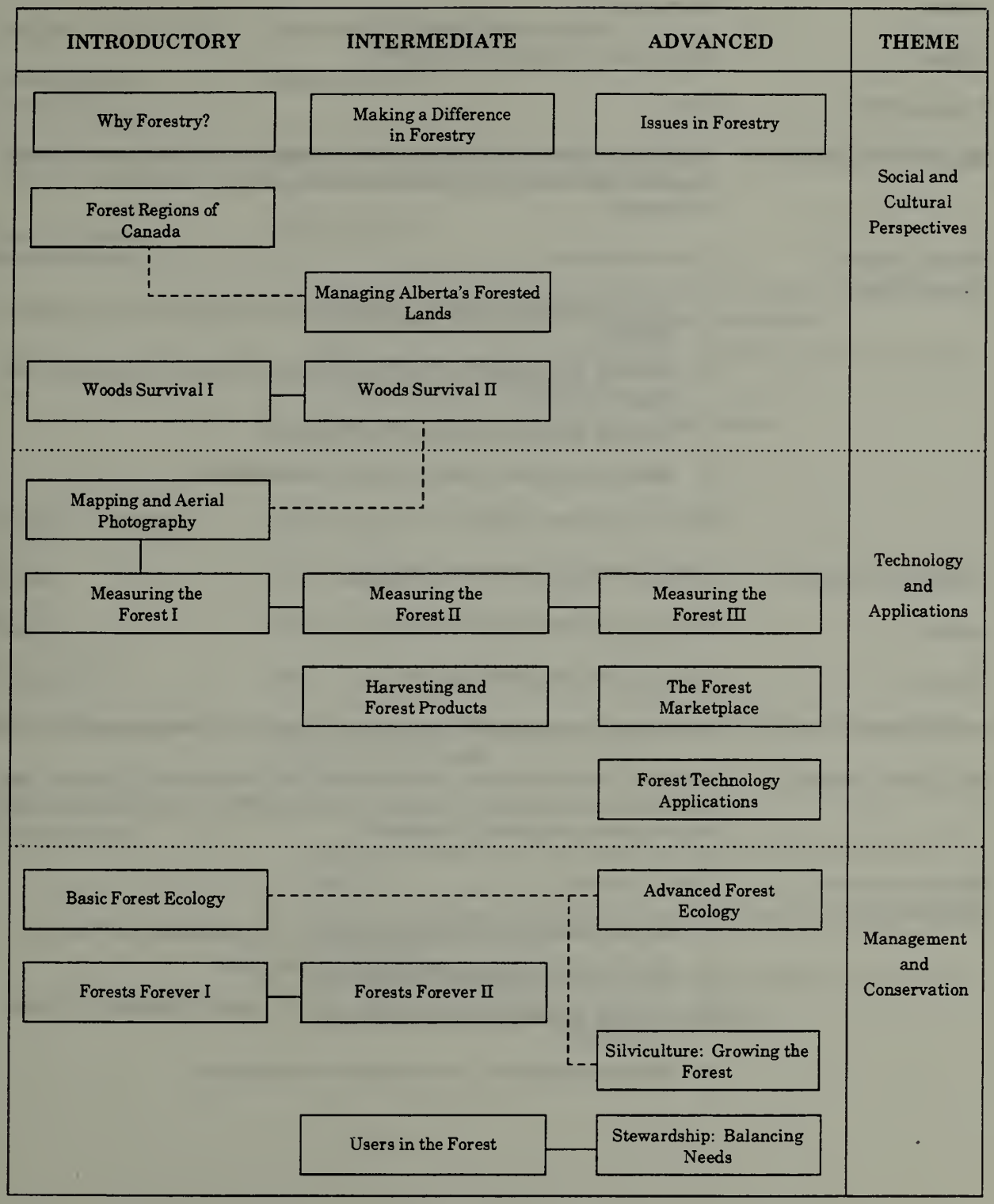
- monitor technologies and research programs designed to develop, conserve, protect, enhance and sustain the productivity of forested lands

- translate development and conservation goals into viable plans for managing the use of the forest resource

- develop competencies and behaviours that have broad application to environmental career paths, and specific application to careers within Alberta's forest industries.

Although students are at various stages of cognitive development, many will continue to use concrete operational thinking. Each module in Forestry provides opportunities for students to link concrete and psychomotor learning experiences to more abstract thought processes and levels of thinking. Students will be encouraged to transfer the competencies they have developed in other core and complementary school courses as well as through hobbies, interests and past experiences. As students learn to relate theory and practice in participatory situations, confidence will further their ability to meet personal and professional challenges.

SCOPE AND SEQUENCE — FORESTRY



Prerequisite ---- Recommended prerequisite or corequisite

MODULE FOR101: **WHY FORESTRY?**

Level: **Introductory**

Theme: **Social and Cultural Perspectives**

Prerequisite: **None**

Module Description: Students explain the social and environmental significance of forests, describe the impact of individuals on forests, and investigate career paths in forestry.

Module Learner Expectations

The student will:

- explain the social, cultural, economic and environmental significance of forests
- describe the impact of individual needs, wants and beliefs on the forest resource
- research potential career paths in forestry
- demonstrate effort to develop basic competencies.

MODULE FOR102: **FOREST REGIONS OF CANADA**

Level: **Introductory**

Theme: **Social and Cultural Perspectives**

Prerequisite: **Knowledge of geographic regions of Canada (Recommended)**

Module Description: Students identify factors that determine the distribution of forests, and research forest regions of Canada (with emphasis on specific species and forest associations found in Alberta).

Module Learner Expectations

The student will:

- identify factors that determine the type and distribution of forests
- locate and describe the forest regions of Canada
- identify and describe trees that grow in specific regions of Canada and Alberta
- demonstrate effort to develop basic competencies.

MODULE FOR104: **WOODS SURVIVAL I**

Level: **Introductory**

Theme: **Social and Cultural Perspectives**

Prerequisite/ Corequisite: **Basic First Aid**

Module Description: Students demonstrate basic skills required for responsible participation in a range of outdoor activities in the forest.

Module Learner Expectations: *The student will:*

- demonstrate knowledge, skills and attitudes that are necessary for safe and comfortable outdoor experiences in the forest
- participate in a range of outdoor forest activities that have minimal impact on the forest resource
- demonstrate effort to develop basic competencies.

MODULE FOR105: **MAPPING AND AERIAL PHOTOGRAPHY**

Level: **Introductory**

Theme: **Technology and Applications**

Prerequisite: **None**

Module Description: Students interpret information conveyed through different types of maps and aerial photographs.

Module Learner Expectations: *The student will:*

- describe different types of maps and aerial photographs used in forestry
- interpret and apply information conveyed through maps and aerial photographs
- demonstrate procedures used to create maps and aerial photographs
- demonstrate effort to develop basic competencies.

MODULE FOR106: **MEASURING THE FOREST I**

Level: **Introductory**

Theme: **Technology and Applications**

Prerequisite: **Mapping and Aerial Photography (FOR105; Recommended)**

Module Description: Students demonstrate basic forest measurement skills and apply these skills in sampling fibre values in a forested region.

Module Learner Expectations:

The student will:

- explain the general goals and techniques of conducting a forest survey
- demonstrate basic compass and measurement skills used in forest inventory practices
- sample fibre values in a forested region
- demonstrate effort to develop basic competencies.

MODULE FOR109: **BASIC FOREST ECOLOGY**

Level: **Introductory**

Theme: **Management and Conservation**

Prerequisite: **Science 7 (Recommended)**

Module Description: Students investigate forest ecosystems and explain the structure and functioning of trees.

Module Learner Expectations:

The student will:

- describe the interrelatedness of elements in the forest ecosystem
- describe structural units of the tree and their function in performing life processes
- demonstrate effort to develop basic competencies.

MODULE FOR110: **FORESTS FOREVER I**

Level: **Introductory**

Theme: **Management and Conservation**

Prerequisite: **None**

Module Description: Students describe past and present uses of Canada's forests, and explain how research and technology assist in forest management.

Module Learner Expectations:

The student will:

- describe past and present uses of Canada's forests
- explain that increased demands on the forest have created a need for conservation and management of forested regions
- research the role of technology in forest protection
- demonstrate effort to develop basic competencies.

MODULE FOR201: **MAKING A DIFFERENCE IN FORESTRY**

Level: **Intermediate**

Theme: **Social and Cultural Perspectives**

Prerequisite: **None**

Module Description: Students analyze the impact of lifestyle on forests, and propose individual and shared actions that foster environmental stewardship.

Module Learner Expectations:

The student will:

- assess the impact of personal attitudes, actions and lifestyle on the forest resource
- describe strategies for reducing, reusing and recycling
- demonstrate commitment to environmental stewardship through personal and shared actions
- demonstrate effort to improve basic competencies.

MODULE FOR203: **MANAGING ALBERTA'S FORESTED LANDS**

Level: **Intermediate**

Theme: **Social and Cultural Perspectives**

Prerequisite/ Corequisite: **Forest Regions of Canada (FOR102; Recommended)**

Module Description: Students research agencies and frameworks used to manage forested lands in Alberta.

Module Learner Expectations: *The student will:*

- explain how Alberta's forested lands are administered
- research government legislation and policies affecting the forest resource
- describe different ways of allocating land and timber in forest management
- demonstrate effort to improve basic competencies.

MODULE FOR204: **WOODS SURVIVAL II**

Level: **Intermediate**

Theme: **Social and Cultural Perspectives**

Prerequisite/ Corequisite: **Woods Survival I (FOR104)**
Mapping and Aerial Photography (FOR105; Recommended)

Module Description: Students plan, prepare for and conduct an extended outdoor wilderness trip in the forest.

Module Learner Expectations: *The student will:*

- plan and prepare for an extended outdoor wilderness trip in the forest
- safely conduct and conclude an extended outdoor wilderness trip in the forest with minimal environmental impact
- demonstrate effort to improve basic competencies.

MODULE FOR206: **MEASURING THE FOREST II**

Level: **Intermediate**

Theme: **Technology and Applications**

Prerequisite: **Measuring the Forest I (FOR106)**

Module Description: Students research current forest inventory practices and demonstrate appropriate strategies for sampling the fibre and non-fibre value of forests.

Module Learner Expectations: *The student will:*

- research specific sampling techniques used to gather information about the forest resource
- sample fibre and non-fibre values in a forest region
- demonstrate effort to improve basic competencies.

MODULE FOR207: **HARVESTING AND FOREST PRODUCTS**

Level: **Intermediate**

Theme: **Technology and Applications**

Prerequisite: **None**

Module Description: Students research the steps involved in harvesting and processing the fibre resource.

Module Learner Expectations: *The student will:*

- identify steps involved in developing a plan for forest harvest
- describe the mechanics of harvesting trees
- research techniques used in fibre utilization and product formation
- demonstrate effort to improve basic competencies.

MODULE FOR210: **FORESTS FOREVER II**

Level: **Intermediate**

Theme: **Management and Conservation**

Prerequisite: **Forests Forever I (FOR110)**

Module Description: Students explain forest management goals in Alberta, and describe current management practices used to address these goals.

Module Learner Expectations:

The student will:

- explain the goals of forest management in Alberta
- identify different types of forest use and the views of different users in the forest
- describe current practices used to manage Alberta's forested lands
- demonstrate effort to improve basic competencies.

MODULE FOR212: **USERS IN THE FOREST**

Level: **Intermediate**

Theme: **Management and Conservation**

Prerequisite: **None**

Module Description: Students identify different users in the forest and explain the planning principles that are used in developing an integrated resource management plan.

Module Learner Expectations:

The student will:

- identify different uses of the forest and the needs of each forest user
- explain the principles of integrated land use
- research the development of a plan for integrated resource management
- demonstrate effort to improve basic competencies.

MODULE FOR301: **ISSUES IN FORESTRY**

Level: **Advanced**

Theme: **Social and Cultural Perspectives**

Prerequisite: **None**

Module Description: Students analyze local and global issues in forest management, and demonstrate individual and shared actions that foster environmental stewardship.

Module Learner Expectations:

The student will:

- identify social, economic and environmental perspectives associated with current issues in forest management
- explain how issues and trends involving Canada's forests may be similar to those in other parts of the world
- demonstrate individual and shared actions that foster the conservation and management of forested regions
- demonstrate effort to refine basic competencies.

MODULE FOR306: **MEASURING THE FOREST III**

Level: **Advanced**

Theme: **Technology and Applications**

Prerequisite: **Measuring the Forest II (FOR206)**

Module Description: Students explain management applications of data collected from a forest survey, and examine the role of technology in current forest inventory practices.

Module Learner Expectations:

The student will:

- explain the applications of forest survey data in resource management
- research the role of technology in current forest inventory practices
- examine career opportunities in forest measurement
- demonstrate effort to refine basic competencies.

MODULE FOR307: **THE FOREST MARKETPLACE**

Level: **Advanced**

Theme: **Technology and Applications**

Prerequisite/ Corequisite: **Harvesting and Forest Products (FOR207; Recommended)**

Module Description: Students describe the range of consumer products and services derived from Canada's forests, and research the production and marketing of forest products.

Module Learner Expectations:

The student will:

- describe market-based products/services and extra-market values derived from Canada's forests
- research the processing of fibre and non-fibre forest products in Canada and Alberta
- analyze marketing systems and market trends for forest products
- demonstrate effort to refine basic competencies.

MODULE FOR308: **FOREST TECHNOLOGY APPLICATIONS**

Level: **Advanced**

Content Theme: **Technology and Application**

Prerequisite: **None**

Module Description: Students examine applications of research and technology in the forest industry, and changing career opportunities in the forestry sector.

Module Learner Expectations:

The student will:

- describe different types of forest research being conducted in Canada and Alberta
- give examples of past, present and emerging technologies used in the forest industry
- research career requirements, opportunities and trends within the forestry sector
- demonstrate effort to refine basic competencies.

MODULE FOR309: **ADVANCED FOREST ECOLOGY**

Level: **Advanced**

Theme: **Management and Conservation**

Prerequisite: **Basic Forest Ecology (FOR109), Biology 20 (Recommended)**

Module Description: Students investigate interrelationships among soil, water, air, trees and the environment, and explain how forests change.

Module Learner Expectations: *The student will:*

- analyze the effects of soil, air and water characteristics on forest ecosystems
- research factors that determine the ability of tree species and forest ecosystems to occur in particular environments
- explain the process of change in a forest environment
- demonstrate effort to refine basic competencies.

MODULE FOR311: **SILVICULTURE: GROWING THE FOREST**

Level: **Advanced**

Theme: **Management and Conservation**

Prerequisite: **Basic Forest Ecology (FOR109; Recommended)**

Module Description: Students demonstrate knowledge of the techniques used in establishing, growing and harvesting tree crops.

Module Learner Expectations: *The student will:*

- describe silviculture and the silvics of Alberta tree species
- demonstrate practices used to establish a stand of trees and manipulate growing conditions to favour particular species
- research growth/harvest relationships and appropriate methods of harvesting tree species
- demonstrate effort to refine basic competencies.

MODULE FOR312:	**STEWARDSHIP: BALANCING NEEDS**
Level:	**Advanced**
Theme:	**Management and Conservation**
Prerequisite:	**Users in the Forest (FOR212)**
Module Description:	Students develop and present an integrated plan for sustainable development of the forest resource.
Module Learner Expectations:	*The student will*: • describe basic forest management principles • establish a plan for the sustainable development and integrated use of forested land • demonstrate effort to refine basic competencies.

INFORMATION PROCESSING

STRAND RATIONALE

Information Processing represents the study of electronic technologies as they apply to personal use and the business environment.

As we move more rapidly into the information age, it is crucial that students are able to use electronic technologies to access and manipulate information in an efficient manner. Accurate, timely information is the basis for sound decision making and effective communication.

As students build confidence in their understanding of the various information processing tools and processes, they will be able to transfer their knowledge and skill to a wide range of contexts, and will be better able to adapt to the continual changes caused by the evolving technologies.

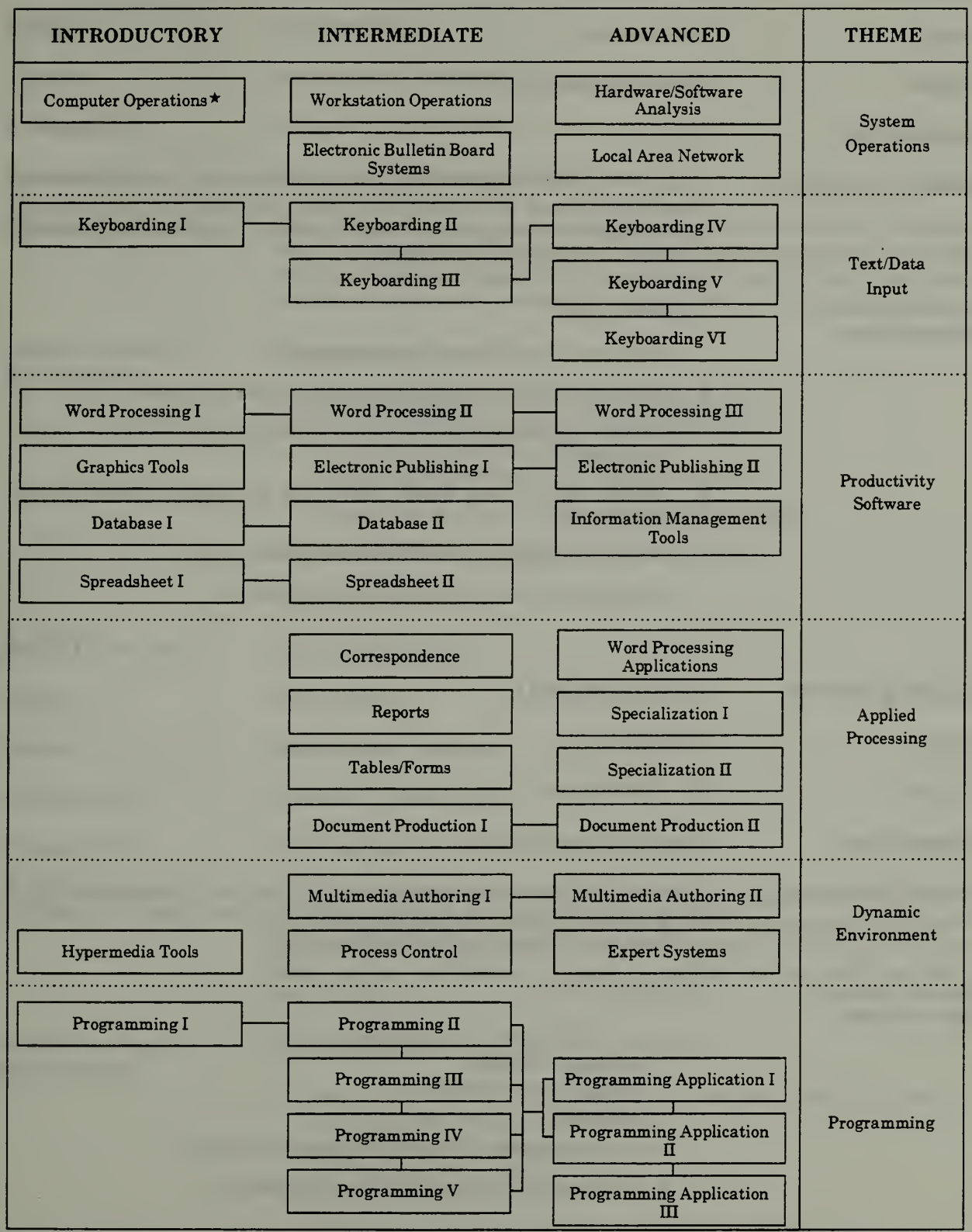
To understand the shift from the *industrial society* towards the *information age*, it is important that a student understands the significance of the current technological development and how technology affects an individual's daily life as well as the impact it has on the world of work. Within this perspective Information Processing provides for the development of:

- a meaningful study of technological trends
- an understanding of the stems that relate in whole or in part, to the management of information
- an understanding of the ethical and societal issues concerning technological development and its impact on society
- technological skills and knowledge designed for personal use
- technological skills and knowledge that transfer to other curriculum areas
- technological skills and knowledge required for the world of work.

Students will learn to input, process and output information in the following areas:

- text/data input
- productivity software
- applied processing
- dynamic environment
- programming (procedure-oriented and object-oriented).

SCOPE AND SEQUENCE — INFORMATION PROCESSING



—— Prerequisite

★ Prerequisite to all modules in this strand.

MODULE INF101: **COMPUTER OPERATIONS**

Level: **Introductory**

Theme: **Systems Operations**

Prerequisite: **None**

Module Description: Computer Operations is pre/corequisite to all modules in the Information Processing strand and develops personal use skill in the following applications: file management, basic hardware and software operations, text entry and workstation routines.

Module Learner Expectations: *The student will:*

- demonstrate basic file management skills
- enter text and data using proper touch keyboarding technique
- identify components of a computer workstation and basic functions of a computer
- describe one or more recent initiatives or issues in technological development
- consistently apply appropriate workstation routines
- demonstrate effort to develop basic competencies.

MODULE INF102: **KEYBOARDING I**

Level: **Introductory**

Theme: **Text/Data Input**

Prerequisite: **Computer Operations**

Module Description: This module provides an opportunity for students to develop accurate touch-keystroking of text and data appropriate for personal use and the application of efficient workstation procedures.

Module Learner Expectations: *The student will:*

- demonstrate keyboarding competence
  - text entry (20 wpm)
  - numeric entry (80 kpm)
  - technique
- consistently apply appropriate workstation routines
- demonstrate effort to develop basic competencies.

MODULE INF103: **WORD PROCESSING I**

Level: **Introductory**

Theme: **Productivity Software**

Prerequisite: **Computer Operations**

Corequisite: **Keyboarding I (recommended)**

Module Description: This module provides an opportunity for students to develop skill in using basic commands and functions in word-processing software, including document editing, formatting and printing of reports, correspondence, and tables suitable for personal use applications.

Module Learner Expectations:

The student will:

- produce an accurate, properly formatted copy of a:
  - report paginated with headings, references
  - letter with basic components
  - two-column table with main and subheads
- consistently apply appropriate workstation routines
- demonstrate effort to develop basic competencies.

MODULE INF104: **GRAPHICS TOOLS**

Level: **Introductory**

Theme: **Productivity Software**

Prerequisite: **Computer Operations**

Corequisite: **Workstation Operations (recommended)**

Module Description: Students learn to the basic commands and functions of computer graphing software, including bitmapped graphics (paint program), vector graphics (draw program) and presentation graphics. Students develop basic skills in manipulating pre-made graphics as well as producing their own graphics.

Module Learner Expectations:

The student will:

- demonstrate the basic elements and principles of design by using computer software graphing tools to:
  - duplicate graphics designs
  - create graphics layout
  - use presentation software
- consistently apply appropriate workstation routines
- demonstrate effort to develop basic competencies.

MODULE INF105: **DATABASE I**

Level: **Introductory**

Theme: **Productivity Software**

Prerequisite: **Computer Operations**

Module Description: Students are introduced to the basic commands and functions of software and demonstrate how database software can be used as a personal tool in data and information management.

Module Learner Expectations:

The student will:

- demonstrate basic electronic database software competence by:
  - creating a database
  - manipulating data and preparing reports
- consistently apply appropriate workstation routines
- demonstrate effort to develop basic competencies.

MODULE INF106: **SPREADSHEET I**

Level: **Introductory**

Theme: **Productivity Software**

Prerequisite: **Computer Operations**

Module Description: Students have an opportunity to use basic functions and commands in spreadsheet software for general data manipulation and personal record keeping.

Module Learner Expectations:

The student will:

- demonstrate basic electronic spreadsheet software competence by:
  - creating a spreadsheet
  - manipulating the data in a spreadsheet and generating reports
- consistently apply appropriate workstation routines
- demonstrate effort to develop basic competencies.

MODULE INF107: HYPERMEDIA TOOLS

Level: Introductory

Theme: Dynamic Environment

Prerequisite: Computer Operations

Module Description: Students develop basic skills with tools used for computerized presentations involving text, data, graphics, sounds and animation.

Module Learner Expectations:

The student will:

- demonstrate basic hypermedia software competence by:
  - accessing hypermedia tools
  - using these tools for specific purposes as directed
  - applying hypermedia tools to produce a short presentation
- consistently apply appropriate workstation routines
- demonstrate effort to develop basic competencies.

MODULE INF108: PROGRAMMING I

Level: Introductory

Theme: Object-Oriented, Procedure-Oriented Programming

Prerequisite: Computer Operations

Module Description: Students are introduced to computer programming languages and a structured programming environment and will construct algorithms and code instructions to solve identified problems.

Module Learner Expectations:

The student will:

- demonstrate basic computer programming skill by:
  - creating algorithms to solve problems
  - applying introductory structured computer coding programming skills
- consistently apply appropriate workstation routines
- demonstrate effort to develop basic competencies.

MODULE INF201: **WORKSTATION OPERATIONS**

Level: **Intermediate**

Theme: **System Operations**

Prerequisite: **Computer Operations**

Module Description: Students learn computer workstation operations including computer architecture, peripherals, configurations, operating system environments and platforms, utility software, diagnostic and protection software, hard drive file updating and maintenance, support resource application, and troubleshooting activities.

Module Learner Expectations: *The student will:*

- utilize file management procedures efficiently
- install and use software to support and maintain the integrity of workstation hardware
- configure and maintain workstation hardware
- consistently apply workstation routines
- demonstrate effort to improve basic competencies.

MODULE INF202: **ELECTRONIC BULLETIN BOARD SYSTEMS**

Level: **Intermediate**

Theme: **Systems Operations**

Prerequisite: **Computer Operations**

Corequisite: **Workstation Operations (recommended)**

Module Description: This module provides an opportunity for students to learn to operate and maintain an EBB system(s), including proper use of hardware, software, peripherals, interface protocols, telecommunication equipment, data transmission characteristics and messaging parameters.

Module Learner Expectations: *The student will:*

- demonstrate basic EBB system competencies as:
  - a user
  - an operator/manager
  - a technician
- consistently apply workstation routines
- demonstrate effort to improve basic competencies.

MODULE INF203: **KEYBOARDING II**

Level: **Intermediate**

Theme: **Text/Data Input**

Prerequisite: **Keyboarding I**

Module Description: This module enhances the students' personal use keyboarding competencies by increasing the rate of accurate touch-keystroking of the alphabet and numbers and selected punctuation keys.

Module Learner Expectations:

The student will:

- demonstrate keyboarding competence
  - text entry (30 wpm)
  - numeric entry (100 kps)
  - technique
- consistently apply appropriate workstation routines
- demonstrate effort to improve basic competencies.

MODULE INF204: **KEYBOARDING III**

Level: **Intermediate**

Theme: **Text/Data Input**

Prerequisite: **Keyboarding I**

Module Description: This module enhances the students' keyboarding competencies by increasing the rate of accurate touch-keystroking of alphabetic, numeric and all punctuation keys to support personal use and limited entry-level workplace opportunities.

Module Learner Expectations:

The student will:

- demonstrate keyboarding competence
  - text entry (40 wpm)
  - numeric entry (120 kps)
  - technique
- consistently apply appropriate workstation routines
- demonstrate effort to improve basic competencies.

MODULE INF205: **WORD PROCESSING II**

Level: **Intermediate**

Theme: **Productivity Software**

Prerequisite: **Word Processing I**
(Keyboarding II recommended corequisite)

Module Description: Students expand their skills in using word-processing software commands and functions to produce mailable reports, correspondence (including letters and memos) and tables from rough draft copy.

Module Learner Expectations: *The student will:*

- produces an accurate, properly formatted copy of a:
  - report paginated with headers, footers and title pages
  - letter with special notations in a designated letter style
  - multi-column table with borders and footnotes
- consistently apply workstation routines
- demonstrate effort to improve basic competencies.

MODULE INF206: **ELECTRONIC PUBLISHING I**

Level: **Intermediate**

Theme: **Productivity Software**

Prerequisite: **Word Processing I, Graphics Tools**

Module Description: This module provides an opportunity for students to develop skill using electronic/desktop publishing software to create a variety of camera-ready documents.

Module Learner Expectations: *The student will:*

- demonstrate basic electronic publishing software competence by:
  - using page make-up tools and commands to produce a camera-ready document
- consistently apply workstation routines
- demonstrate effort to improve basic competencies.

MODULE INF207: **DATABASE II**

Level: **Intermediate**

Theme: **Productivity Software**

Prerequisite: **Database I**

Module Description: Students use all the commands and functions of electronic database software that support effective and efficient database applications.

Module Learner Expectations:

The student will:

- demonstrate advanced level electronic database software competence by:
  - creating hierarchical and relational databases
  - importing and manipulating data and preparing reports
- consistently apply workstation routines
- demonstrate effort to improve basic competencies.

MODULE INF208: **SPREADSHEET II**

Level: **Intermediate**

Theme: **Productivity Software**

Prerequisite: **Spreadsheet I**

Module Description: Students demonstrate advanced level spreadsheet commands and functions to calculate and manipulate data and prepare appropriate printouts and reports in text and graphic format.

Module Learner Expectations:

The student will:

- demonstrate advanced level electronic spreadsheet software competence by:
  - creating a spreadsheet, including importing data
  - manipulating data in a spreadsheet and generating reports
- consistently apply workstation routines
- demonstrate effort to improve basic competencies.

MODULE INF209: **CORRESPONDENCE**

Level: **Intermediate**

Theme: **Applied Processing**

Pre/corequisite: **Word Processing II, Keyboarding III**

Module Description: Student expand their rate of document production as they prepare various forms of correspondence in mailable form, using word-processing software.

Module Learner Expectations: *The student will*:

- demonstrate efficient word-processing correspondence competence by the:
  - production of mailable correspondence in a variety of formats under time constraints
  - ability to edit and format correspondence
- consistently apply workstation routines
- demonstrate effort to improve basic competencies.

MODULE INF210: **REPORTS**

Level: **Intermediate**

Theme: **Applied Processing**

Pre/corequisite: **Word Processing II, Keyboarding III**

Module Description: Students expand their rate of production as they prepare various reports and manuscripts in mailable form.

Module Learner Expectations: *The student will*:

- demonstrate efficient word-processing report/manuscript competence by the:
  - production of mailable reports in a variety of formats under time constraints
  - ability to edit and customize reports
- consistently apply workstation routines
- demonstrate effort to improve basic competencies.

MODULE INF211: **TABLES/FORMS**

Level: **Intermediate**

Theme: **Applied Processing**

Pre/corequisite: **Word Processing II, Keyboarding III**

Module Description: Students expand their rate of document production as they prepare various tables/forms in mailable form.

Module Learner Expectations:

The student will:

- demonstrate efficient word-processing tables/forms competence by the:
  - production of mailable tables in a variety of formats under time constraints
  - ability to design a mailable form for a specific purpose and audience
  - ability to edit, modify and customize tables/forms
- consistently apply workstation routines
- demonstrate effort to improve basic competencies.

MODULE INF212: **DOCUMENT PRODUCTION I**

Level: **Intermediate**

Theme: **System Operations**

Pre/corequisite: **Keyboarding III, Word Processing II, Spreadsheet I, Database I**

Module Description: This module provides an opportunity for students to develop document production skills requiring the integration of data, text and graphics.

Module Learner Expectations:

The student will:

- demonstrate word-processing and data management systems/ graphics software integration competence by:
  - producing mailable word-processing documents that integrate data, text and presentation graphics in a variety of specific applications
- consistently apply workstation routines
- demonstrate effort to improve basic competencies.

MODULE INF213: **MULTIMEDIA AUTHORING I**

Level: **Intermediate**

Theme: **Dynamic Environment**

Pre/corequisite: **Graphics Tools**

Module Description: This module introduces multimedia software and an opportunity to develop basic authoring competence by accessing and integrating software resident text, video, audio clips.

Module Learner Expectations: *The student will:*

- demonstrate multimedia authoring competence by using software resident text, video, audio clips:
  - use software-specific commands to access and manipulate text video and audio
  - develop multimedia presentation
- consistently apply workstation routines
- demonstrate effort to improve basic competencies.

MODULE INF214: **PROCESS CONTROL**

Level: **Intermediate**

Theme: **Dynamic Environment**

Pre/corequisite: **Computer Operations (Hypermedia Tools recommended pre/corequisite)**

Module Description: Students develop skills in robotics/simulation software control by creating/modifying/using programs that incorporate computer-controlled movements/events in robotics/simulation activities/applications.

Module Learner Expectations: *The student will:*

- demonstrate basic electronic process control software competence by:
  - explaining the theory and processes used to control a robot and/or other simulation
  - construct a robot or cause a robot to function as intended through computer control
- consistently apply workstation routines
- demonstrate effort to improve basic competencies.

MODULE INF215: **PROGRAMMING II**

Level: **Intermediate**

Prerequisite: **Programming I**

Module Description: Students have an opportunity to increase programming skills by designing and generating programming code to handle decision-making and repetitive processes.

Module Learner Expectations: *The student will:*

- demonstrate basic computer programming skill by:
  - creating algorithms to solve problems involving decision making and iteration
  - constructing computer programs involving decision making and iterative processes
- consistently apply workstation routines
- demonstrate effort to improve basic competencies.

MODULE INF216: **PROGRAMMING III**

Level: **Intermediate**

Prerequisites: **Programming II**

Module Description: Students have an opportunity to increase programming skills by using sub-program structures.

Module Learner Expectations: *The student will:*

- restructure existing computer programs by:
  - using sub-program structures
  - revising and constructing computer programs involving sub-program structures
- modify the algorithm to isolate the component operations/processes that were incorporated into the sub-program structure
- consistently apply workstation routines
- demonstrate effort to improve basic competencies.

MODULE INF217: **PROGRAMMING IV**

Level: **Intermediate**

Prerequisite: **Programming III**

Module Description: Students have an opportunity to increase programming skills by developing and using derived data types.

Module Learner Expectations: *The student will*:

- demonstrate evolving computer programming skill by:
  - creating algorithms to solve problems supporting derived data types (arrays, character strings, records, sets)
  - creating structured programs use derived data types
- consistently apply workstation routines
- demonstrate effort to improve basic competencies.

MODULE INF218: **PROGRAMMING V**

Level: **Intermediate**

Prerequisite: **Programming IV**

Module Description: Students have an opportunity to increase programming skills by developing and using recursive, sorting and merging algorithms.

Module Learner Expectations: *The student will*:

- demonstrate evolving computer programming skills by:
  - examining/creating different recursive, sorting, searching and merging algorithms
  - revising/creating structured programs containing operations on derived data types
- consistently apply workstation routines
- demonstrate effort to improve basic competencies.

MODULE INF301: **HARDWARE/SOFTWARE ANALYSIS**

Level: **Advanced**

Theme: **Systems Operations**

Prerequisite: **Computer Operations**

Corequisite: **Workstation Operations (recommended)**

Module Description: This module provides an opportunity for students to analyze, compare and evaluate hardware/software on the basis of user requirements.

Module Learner Expectations: *The student will:*

- analyze and compare computer hardware and software systems
  - prepare and present a report recommending hardware and software configurations
- consistently apply appropriate workstation routines
- demonstrate effort to refine basic competencies.

MODULE INF302: **LOCAL AREA NETWORKS**

Level: **Advanced**

Theme: **Systems Operations**

Prerequisite: **Computer Operations**

Pre/Corequisite **Workstation Operations (recommended)**

Module Description: Students learn about local area network (LAN) computer systems, including hardware and peripheral configurations, interface protocols and data transmission characteristics.

Module Learner Expectations: *The student will:*

- demonstrate basic LAN competence as:
  - a user
  - an operator/manager
  - a technician
- consistently apply appropriate workstation routines
- demonstrate effort to refine basic competencies.

MODULE INF303: **KEYBOARDING IV**

Level: **Advanced**

Theme: **Text/Data Input**

Prerequisite: **Keyboarding III**

Module Description: This module develops the students' keyboarding skill of text and data to entry-level occupational expectations.

Module Learner Expectations:

The student will:

- demonstrate proficient keyboarding competence:
  - text entry (50 wpm)
  - numeric entry(150 kpm)
  - technique
- consistently apply appropriate workstation routines
- demonstrate effort to refine basic competencies.

MODULE INF304: **KEYBOARDING V**

Level: **Advanced**

Theme: **Text/Data Input**

Prerequisite: **Keyboarding IV**

Module Description: This module increases occupational-level keyboarding competence involving text, data and function/service keys from straight copy and edited material.

Module Learner Expectations:

The student will:

- demonstrate proficient keyboarding competence:
  - text entry (60 wpm)
  - numeric entry (180 kpm)
  - technique
- consistently apply appropriate workstation routines
- demonstrate effort to refine basic competencies.

MODULE INF305: **KEYBOARDING VI**

Level: **Advanced**

Theme: **Text/Data Input**

Prerequisite: **Keyboarding V**

Module Description: This module enhances occupational-level keyboarding competence involving all keystroke functions from unedited, edited and straight copy material.

Module Learner Expectations: *The student will:*

- demonstrate proficient keyboarding competence:
  - text entry (70 wpm)
  - numeric entry (200 kpm)
  - technique
- consistently apply appropriate workstation routines
- demonstrate effort to refine basic competencies.

MODULE INF306: **WORD PROCESSING III**

Level: **Advanced**

Theme: **Productivity Software**

Prerequisite: **Word Processing II**

Corequisite: **Keyboarding III (recommended)**

Module Description: This module provides an opportunity for students to develop occupational-level competence in the use of word-processing software commands and functions to produce mailable reports, correspondence, and tables including the importing and merging of text, data and graphics.

Module Learner Expectations: *The student will:*

- produce a mailable copy of a:
  - multi-page report with title pages, table of contents, bibliography appendices, reference lines
  - two-page letters in designated letter style that incorporate special formats
  - memo
  - table
- consistently apply appropriate workstation routines
- demonstrate effort to refine basic competencies.

MODULE INF307: **ELECTRONIC PUBLISHING II**

Level: **Advanced**

Theme: **Productivity Software**

Prerequisite: **Electronic Publishing I**

Module Description: Students use the functions and commands of electronic/desktop publishing software as they integrate text composing, editing, typesetting, graphic generation and page layout functions to create customized, professional-quality documents.

Module Learner Expectations: *The student will:*

- demonstrate electronic publishing software competence by producing a customized document:
  - applying software make-up tools and commands
  - creating a customized document effectively incorporating text and graphics to communicate an idea or activity
- consistently apply appropriate workstation routines
- demonstrate effort to refine basic competencies.

MODULE INF308: **INFORMATION MANAGEMENT TOOLS**

Level: **Advanced**

Theme: **Productivity Software**

Prerequisite: **Database II**
Spreadsheet II (recommended pre/corequisite)

Module Description: This module is designed to develop students' competence in using a variety of information management system software such as project management, schedules and planners for either personal or workplace applications.

Module Learner Expectations: *The student will:*

- demonstrate the ability to use information management software to:
  - plan projects, including setting goals, time lines and resource needs
  - monitor projects, including time and resource management
  - adjust project files as appropriate
  - prepare project reports
  - describe the features of the information management software used
- consistently apply appropriate workstation routines
- demonstrate effort to refine basic competencies.

MODULE INF309: **WORD PROCESSING APPLICATIONS**

Level: **Advanced**

Theme: **Applied Processing**

Prerequisite: **Correspondence, Reports, Tables/Forms, Keyboarding V, Word Processing III**

Module Description: This module develops high rates of production as students produce documents using numerous functions/commands for create, revise, format and print a wide range of documents in mailable form.

Module Learner Expectations: *The student will:*

- demonstrate workplace standards in word-processing document production
- consistently apply appropriate workstation routines
- demonstrate effort to refine basic competencies.

MODULE INF310: **SPECIALIZATION I**

Level: **Advanced**

Theme: **Applied Processing**

Pre/corequisite: **Word Processing II, Keyboarding III**

Module Description: This module provides an opportunity to specialize in document preparation, terminology application, and associated office routine expectations in a specific focus area such as a medical, legal, petroleum, real estate, insurance, travel/tourism, forestry or agricultural environment.

Module Learner Expectations: *The student will:*

- demonstrate basic competence in a specific focus area by:
  - using appropriate terminology
  - preparing/producing documents
  - exhibiting professional attributes
- consistently apply appropriate workstation routines
- demonstrate effort to refine basic competencies.

MODULE INF311: **SPECIALIZATION II**

Level: **Advanced**

Theme: **Applied Processing**

Pre/corequisite: **Specialization I**

Module Description: This module provides an opportunity to develop workplace competence in a specific focus area such as medical, legal, petroleum, real estate, insurance, travel/tourism, forestry, or agricultural environment by creating/completing appropriate documents, employing specialized communication skills and conforming to identified workplace expectations under identified time constraints.

Module Learner Expectations: *The student will*:

- demonstrate entry-level workplace competence in a specific focus area by:
  - using appropriate terminology
  - preparing documents
  - exhibiting professional attributes
- consistently apply appropriate workstation routines
- demonstrate effort to refine basic competencies.

MODULE INF312: **DOCUMENT PRODUCTION II**

Level: **Advanced**

Theme: **Applied Processing**

Pre/corequisite: **Keyboarding IV, Word Processing II, Spreadsheet II, Database II**

Module Description: This module provides an opportunity for students to expand their document production skills to workplace standards. Documents could require the importing and integration of word-processing, spreadsheet, graphics and database files.

Module Learner Expectations: *The student will*:

- demonstrate competence in producing documents that integrate word-processing, data management systems and graphics files/documents:
  - unedited copy
  - unformatted copy
- consistently apply appropriate workstation routines
- demonstrate effort to refine basic competencies.

MODULE INF313: **MULTIMEDIA AUTHORING II**

Level: **Advanced**

Theme: **Dynamic Environment**

Pre/corequisite: **Multimedia Authoring I**

Module Description: This module provides an opportunity to learn to use a multimedia file/media authoring software based on and digitized input of text, video and audio clips.

Module Learner Expectations: *The student will*:

- demonstrate multimedia authoring software and digitized input competence by:
  - capturing text/images video and audio information from external sources and inputting it on a personal computer
  - using captured text/images, video and audio to create a multimedia presentation
- consistently apply appropriate workstation routines
- demonstrate effort to refine basic competencies.

MODULE INF314: **EXPERT SYSTEMS**

Level: **Advanced**

Theme: **Dynamic Environment**

Pre/corequisite: **Computer Operations, Hypermedia Tools or Process Control, Programming I and II, Multimedia Authoring I (recommended)**

Module Description: Students develop an introductory knowledge of expert systems such as artificial intelligence and virtual reality.

Module Learner Expectations: *The student will*:

- develop an information portfolio on expert systems and other advanced technologies
- program an application using one of these systems
- present the results
- consistently apply appropriate workstation routines
- demonstrate effort to refine basic competencies.

MODULE INF315: **PROGRAMMING APPLICATION I**

Level: **Advanced**

Theme: **Programming**

Pre/corequisite: **Programming III**

Module Description: Students create programs that use external files.

Module Learner Expectations:

The student will:

- create an algorithm to solve problems requiring an external data file
- develop programs that create, retrieve, append and modify text/nontext files
- consistently apply appropriate workstation routines
- demonstrate effort to refine basic competencies.

MODULE INF316: **PROGRAMMING APPLICATION II**

Level: **Advanced**

Theme: **Programming**

Prerequisite: **Programming III**

Module Description: Students create a program using a second programming language.

Module Learner Expectations:

The student will:

- employ existing algorithms to solve programming problems
- create programs to solve problems using a second programming language using:
  - basic input/output
  - basic mathematical function
  - looping and branches
  - sub-programs structure
- consistently apply appropriate workstation routines
- demonstrate effort to refine basic competencies.

MODULE INF317: **PROGRAMMING APPLICATION III**

Level: **Advanced**

Theme: **Programming**

Pre/corequisite: **Programming III**

Module Description: Students enhance a program using a second programming language.

Module Learner Expectations:

The student will:

- employ existing/create algorithms to solve programming problems
- create programs to solve problems using a second programming language using:
  - one- and two-dimension arrays
  - character strings
  - sort, search and merge operations
  - external data files
- consistently apply appropriate workstation routines
- demonstrate effort to refine basic competencies.

CSB: 94 05 31

LEGAL STUDIES

STRAND RATIONALE

The law is fundamental to society. Its many functions include the settlement of disputes, the regulation of private arrangements, and the provision of guidelines for conduct in the community.

Legal Studies presents students with basic and practical information about the law. The primary goal is to develop in students the knowledge, skills and attitudes required to respond appropriately to the impact of law on their daily lives. A secondary goal is to equip students with the capabilities and confidence required to participate in the evolution of our laws.

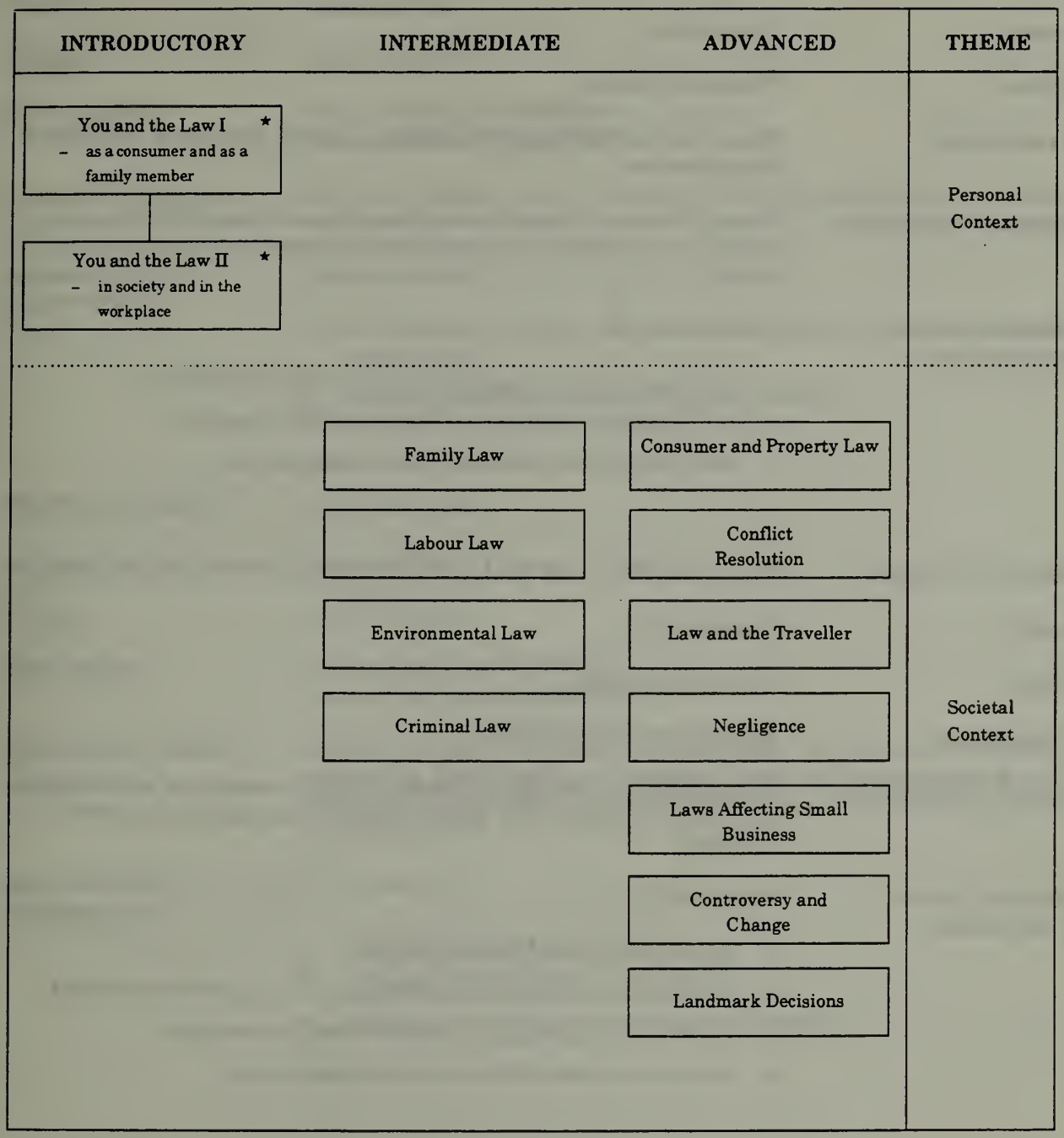
A third goal is to create an awareness of the many law-related occupational opportunities that are available.

Within the philosophy of Career and Technology Studies (CTS), students in Legal Studies *will*:

- develop skills in decision making, problem solving, communication and critical thinking
- develop knowledge, skills and attitudes about the law
- identify the rights granted and the responsibilities imposed by the law
- engage in the critical analysis of legal issues
- develop an appreciation of the individual's ability to influence the law
- demonstrate a tolerance for opinions held by others
- demonstrate the ability to work cooperatively with others
- develop the ability to recognize, avoid and resolve problems with legal implications
- develop an awareness of legal issues in other curricular areas
- investigate career options related to the law.

CSB: 94 05 31

SCOPE AND SEQUENCE — LEGAL STUDIES



—— Prerequisite ---- Recommended prerequisite or corequisite

★ Prerequisite to all modules in this strand.

MODULE LGS101: **YOU AND THE LAW I - AS A CONSUMER AND AS A FAMILY MEMBER**

Level: **Introductory**

Theme: **Personal Context**

Prerequisite: **None; this module is required before taking any other modules in Legal Studies**

Module Description: Through the use of realistic scenarios and cases, students become aware of the laws that affect the consumer and the laws that affect members of a family.

Module Learner Expectations: *The student will:*

- investigate laws related to the consumer and to the family
- where relevant, examine the foundations for these laws
- demonstrate effort to develop basic competencies.

MODULE LGS102: **YOU AND THE LAW II - IN SOCIETY AND IN THE WORKPLACE**

Level: **Introductory**

Theme: **Personal Context**

Prerequisite: **You and the Law I (LGS101)**

Module Description: Students explore laws that affect people in the workplace, and elements of criminal and civil laws about which the average citizen should be informed.

Module Learner Expectations: *The student will:*

- explore laws related to the workplace
- examine the rights and responsibilities of the individual in society
- where relevant, examine the foundations for these laws
- demonstrate effort to develop basic competencies.

MODULE LGS201: **FAMILY LAW**

Level: **Intermediate**

Theme: **Social Context**

Prerequisite: **You and the Law I (LGS101)**
You and the Law II (LGS102)

Module Description: Students explore a broad range of issues related to personal relationships.

Module Learner Expectations: *The student will:*

- investigate the laws regarding different types of personal relationships
- demonstrate effort to develop basic competencies.

MODULE LGS202: **LABOUR LAW**

Level: **Intermediate**

Theme: **Social Context**

Prerequisite: **You and the Law I (LGS101)**
You and the Law II (LGS102)

Module Description: Students explore contracts of employment, unions and collective bargaining, unemployment insurance, workers' compensation and women in the workplace. Challenging issues and law-related careers are also considered.

Module Learner Expectations: *The student will:*

- review present labour legislation
- propose changes in labour legislation
- demonstrate effort to improve basic competencies.

MODULE LGS203: **ENVIRONMENTAL LAW**

Level: **Intermediate**

Theme: **Social Context**

Prerequisite: **You and the Law I (LGS101)**
You and the Law II (LGS102)

Module Description: Students examine laws related to the environment and how new environmental information affects the law. Through the use of cases, students examine the role of groups and individuals in bringing about changes in environmental law, as well as challenging issues and law-related careers.

Module Learner Expectations: *The student will:*

- review present legislation on the environment
- outline procedures for a formal hearing
- propose new legislation or changes to existing legislation
- demonstrate effort to improve basic competencies.

MODULE LGS204: **CRIMINAL LAW**

Level: **Intermediate**

Theme: **Social Context**

Prerequisite: **You and the Law I (LGS101)**
You and the Law II (LGS102)

Module Description: The criminal justice system including the criminal process and the roles and responsibilities of the participants are examined fully. Students have the opportunity to explore challenging issues and law-related careers.

Module Learner Expectations: *The student will:*

- examine the Canadian criminal justice system
- demonstrate effort to improve basic competencies.

MODULE LGS301: **CONSUMER AND PROPERTY LAW**

Level: **Advanced**

Theme: **Social Context**

Prerequisite: **You and the Law I (LGS101)**
You and the Law II (LGS102)

Module Description: Students examine laws related to renting personal and real property, purchasing a home, making investments and building or renovating a home. Methods of protecting the consumer, as well as challenging issues and law-related careers, are also discussed.

Module Learner Expectations: *The student will*:

- investigate laws governing complex consumer transactions
- demonstrate effort to refine basic competencies.

MODULE LGS302: **CONFLICT RESOLUTION**

Level: **Advanced**

Theme: **Social Context**

Prerequisite: **You and the Law I (LGS101)**
You and the Law II (LGS102)

Module Description: Students have the opportunity to demonstrate and apply the methods (negotiation, mediation, arbitration and adjudication) used to resolve conflicts. As well, they examine career opportunities and challenging issues.

Module Learner Expectations: *The student will*:

- differentiate between traditional and alternative dispute resolution methods
- demonstrate an understanding of the progression of dispute resolution options
- demonstrate effort to refine basic competencies.

MODULE LGS303: **LAW AND THE TRAVELLER**

Level: **Advanced**

Theme: **Social Context**

Prerequisite: **You and the Law I (LGS101)**
You and the Law II (LGS102)

Module Description: Students focus on the issues and legal considerations that may arise when individuals travel.

Module Learner Expectations: *The student will*:

- examine the legal considerations when individuals travel domestically or internationally
- demonstrate effort to refine basic competencies.

MODULE LGS304: **NEGLIGENCE**

Level: **Advanced**

Theme: **Social Context**

Prerequisite: **You and the Law I (LGS101)**
You and the Law II (LGS102)

Module Description: Students use cases and scenarios to explore the legal meaning of negligence and the basic requirements to take legal action.

Module Learner Expectations: *The student will*:

- investigate the area of tort law called "negligence"
- demonstrate effort to refine basic competencies.

MODULE LGS305: **LAWS AFFECTING SMALL BUSINESS**

Level: **Advanced**

Theme: **Social Context**

Prerequisite: **You and the Law I (LGS101)**
You and the Law II (LGS102)

Module Description: This module provides information about the laws related to starting a business, running a business and ending a business. There is opportunity to explore challenging issues that affect small business and law-related careers.

Module Learner Expectations: *The student will*:

- examine the legal considerations involved in operating a small business
- demonstrate effort to refine basic competencies.

MODULE LGS306: **CONTROVERSY AND CHANGE**

Level: **Advanced**

Theme: **Social Context**

Prerequisite: **You and the Law I (LGS101)**
You and the Law II (LGS102)

Module Description: Students explore how controversial issues evoke responses that may bring about changes in the law. They also focus on a wide variety of strategies that may be used.

Module Learner Expectations: *The student will*:

- describe how different views of people are expressed in controversial issues affecting society
- describe the various methods used to bring about changes in the law
- demonstrate effort to refine basic competencies.

MODULE LGS307:	**LANDMARK DECISIONS**
Level:	**Advanced**
Theme:	**Social Context**
Prerequisite:	**You and the Law I (LGS101)** **You and the Law II (LGS102)**
Module Description:	This module provides an opportunity to analyze, in detail, "landmark decisions"and their subsequent influence on our political, social and economic environment.
Module Learner Expectations:	*The student will*: • identify "landmark decisions" and analyze their subsequent effects • demonstrate effort to refine basic competencies.

TOURISM STUDIES

STRAND RATIONALE

Tourism is a series of human interactions. It is sometimes referred to as a system, sometimes as an activity and often as an industry. A worldwide phenomenon of global economic importance, tourism is the result of decisions by people to travel. Travellers who become tourists may have different purposes for moving between locations, including visiting family and friends, attending a business meeting and enjoying leisure activities. Learning and participating in tourism activities helps people to develop an appreciation for the world and its people. Travelling brings one culture in contact with another and allows individuals to appreciate the beauty in cultural diversity. It has been said that tourism is the industry of peace; tourism promotes understanding, acceptance and appreciation of others.

Tourism is one of Alberta's fastest growing industries. As the third-largest industry in Alberta, tourism employs 100,000 people and generates $2.5 billion in revenues. By the year 2000, tourism is expected to rise to one of the top revenue generators in the province. Almost 70 per cent of the province's tourism business comes from Albertans travelling within their own province.★

Tourism is a sustainable industry. It encompasses business, organizations, labour and government agencies that totally, or in part, provide the means of transportation, goods, services, accommodation and other facilities, programs and resources. Providing quality guest service and hospitality can mean the difference between success and failure in the tourism industry. Effective communication skills, anticipating and satisfying guest needs, and having a professional appearance and behaviour are basic skills students will need in whatever career path they choose. Tourism Studies can provide relevant, practical situations for students to develop and demonstrate these important skills.

Tourism Studies provides students with a broad awareness of the economic, social and environmental impact of tourism in the province of Alberta. Students will develop an understanding of the present and potential economic contributions of tourism in the context of their community, in Alberta, Canada and the world. However, the impact of tourism can destroy the physical and cultural resources that are the heart of the industry. Community planning and development of tourism is a cooperative effort between private and public sectors and between individuals and

★ Arlene McGinn and Deanna Binder, *Meeting the Needs: Tourism in Secondary Schools: A Pre-development Curriculum Research Report* (Edmonton: Alberta Education, 1990).

organizations. Creative and responsible decisions made at the local level can translate into social, cultural and economic benefits for the entire community. As future employees, business owners and citizens, students will benefit from a better understanding of the importance and implications of tourism development and activities.

Tourism Studies provides the opportunity for students to link concrete and psychomotor learning to abstract, cognitive levels of learning. By developing basic and career-specific knowledge, skills and attitudes, students will have the flexibility to adapt to a variety of situations. They will meet the challenges of their personal life, work life and further educational goals with increased ability and confidence. Students will learn tourism knowledge, skills and attitudes in the context of self, family, society and the workplace.

Within the philosophy of Career and Technology Studies, students in Tourism Studies *will:*

- demonstrate an appreciation for Alberta's cultural and environmental heritage and the importance of protecting and preserving them for future generations
- explain the development of the tourism industry in Alberta and its impact on the province's present and future economic, social and environmental well-being
- demonstrate pride in the local community and in Alberta by studying, promoting and participating in tourism activities
- describe the importance of tourism activities for promoting greater understanding and respect for cultures and individual differences
- exhibit the knowledge, skills and attitudes of quality guest service and hospitality, which are applicable to personal, community and career roles
- use organizational and resource management skills, applicable to personal and career roles, by planning and facilitating real or simulated tourism events in the school and community
- demonstrate individual responsibility, self-management and self-esteem through a variety of practical, relevant learning activities
- use creative thinking skills including problem solving, decision making, idea generation, synthesis and ability to predict outcomes
- access, interpret and evaluate tourism information and communicate this information using a variety of methods
- use interpersonal skills including teamwork and leadership through a wide range of group and class activities, both of practical tourism industry application and of more general social and citizenship value
- demonstrate knowledge and understanding of the scope of occupations and career paths in the tourism industry including small business and entrepreneurship, and of industry standards.

SCOPE AND SEQUENCE — TOURISM STUDIES

INTRODUCTORY	INTERMEDIATE	ADVANCED	THEME
The Tourism Industry	Tourism Events		Nature of the Industry
People and Places			
Quality Guest Service			
Tourism Food Sector	Food Functions	Food Service Operations	Food
Tourism Accommodation Sector	Meetings and Conferences	Hotel/Motel Operations	Accommo-dation
		Alternative Accommodations	
Tourism Travel Sector	Tourism Destinations I	Travel Agency Operations	Travel
	Tourism Destinations II	Airline Reservations	
	Travel Planning	Tourism Air Transportation	
		Tourism Surface Transportation	
Tourism Attractions Sector	Tourism Interpretation I	Attractions Operations	Attractions
	Tourism Interpretation II	Adventure and Ecotourism	

—— Prerequisite ---- Recommended prerequisite or corequisite

MODULE TOU101: **THE TOURISM INDUSTRY**

Level: **Introductory**

Theme: **Nature of the Industry**

Prerequisite: **None**

Module Description: Students analyze the organizational structure of the tourism industry at local and provincial levels, and investigate employment opportunities in tourism.

Module Learner Expectations: *The student will:*

- describe the role of business, organizations, labour and government agencies that make up the industry
- assess the effect different travel motivators have on industry activity
- evaluate local tourism ventures and promotion strategies used to attract visitors
- investigate employment opportunities in the tourism industry
- demonstrate effort to develop basic competencies.

MODULE TOU102: **PEOPLE AND PLACES**

Level: **Introductory**

Theme: **Nature of the Industry**

Prerequisite: **None**

Module Description: Students design strategies for maintaining and enhancing the well-being of tourists, including individuals and groups such as families, and for preserving the cultural and environmental heritage of a tourism area.

Module Learner Expectations: *The student will:*

- analyze the cultural and environmental impact of tourism
- develop strategies for preserving the cultural and environmental heritage of Alberta
- describe how tourism can promote acceptance and understanding among cultures
- describe strategies used in the industry for maintaining and enhancing the well-being of tourists
- demonstrate effort to develop basic competencies.

MODULE TOU103: **QUALITY GUEST SERVICE**

Level: **Introductory**

Theme: **Nature of the Industry**

Prerequisite: **None**

Module Description: Students demonstrate the knowledge, skills and attitudes of quality guest service including hospitality, effective communication and workplace safety.

Module Learner Expectations: *The student will:*

- appreciate the importance of providing professional service
- demonstrate basic competencies in guest service and hospitality including maintaining the safety of self and others
- demonstrate effective communication and problem-solving skills for dealing with guest concerns
- demonstrate effort to develop basic competencies.

MODULE TOU104: **TOURISM FOOD SECTOR**

Level: **Introductory**

Theme: **Food**

Prerequisite: **None**

Module Description: Students evaluate food service establishments, explain basic food-handling principles, demonstrate satisfactory skills of food service and adapt service standards to meet the needs of guests.

Module Learner Expectations: *The student will:*

- compare a variety of local food establishments and career opportunities in the food sector
- develop satisfactory food service skills
- describe basic principles of safe food handling
- develop standards and criteria for excellent food service and modify service to meet guest needs
- demonstrate effort to develop basic competencies.

MODULE TOU105: **TOURISM ACCOMMODATION SECTOR**

Level: **Introductory**

Theme: **Accommodation**

Prerequisite: **None**

Module Description: Students research accommodation options available, discuss basic principles of the accommodations industry and develop service strategies for handling individual guest requirements.

Module Learner Expectations:

The student will:

- describe the range of accommodations available to travellers in Alberta
- develop a basic understanding of business operations in the accommodation sector
- describe strategies for accommodating individual guest requirements and maintaining the well-being of guests
- research employment opportunities in the accommodation sector
- demonstrate effort to develop basic competencies.

MODULE TOU106: **TOURISM TRAVEL SECTOR**

Level: **Introductory**

Theme: **Travel**

Prerequisite: **None**

Module Description: Students research a variety of travel services, demonstrate basic travel information and promotion skills, and investigate career opportunities in providing travel information.

Module Learner Expectations:

The student will:

- describe travel services available to the traveller in Alberta
- develop strategies for addressing visitor inquiries
- provide basic travel and transportation information to the traveller in Alberta
- research employment opportunities in the travel sector
- demonstrate effort to develop basic competencies.

MODULE TOU107: **TOURISM ATTRACTIONS SECTOR**

Level: **Introductory**

Theme: **Attractions**

Prerequisite: **None**

Module Description: Students analyze and compare the natural, cultural and recreation attractions available in Alberta, develop strategies to maintain the well-being of guests and investigate employment opportunities in these areas.

Module Learner Expectations:

The student will:

- describe natural, cultural and recreation attractions, and explain their role in the industry
- describe the range of visitor activities and services provided at attraction facilities
- discuss regulations, procedures and strategies for maintaining the well-being of guests in attraction facilities
- research employment opportunities in the attractions sector
- demonstrate effort to develop basic competencies.

MODULE TOU201: **TOURISM EVENTS**

Level: **Intermediate**

Theme: **Nature of the Industry**

Prerequisite: **None**

Module Description: Students plan, organize, facilitate and evaluate a tourism event in the school or community.

Module Learner Expectations:

The student will:

- describe different types of tourism events and discuss the purposes of such events
- develop a project plan for a tourism event for the school or community and facilitate that event
- develop interpersonal skills of teamwork and leadership by working with others to facilitate an event
- evaluate the success of the project plan and tourism event
- demonstrate effort to improve basic competencies.

MODULE TOU204: **FOOD FUNCTIONS**

Level: **Intermediate**

Theme: **Food**

Prerequisite: **None**

Module Description: In this module, the student demonstrates the knowledge and skills of serving food for a food function that he or she has planned to meet the needs of a client.

Module Learner Expectations: *The student will:*

- demonstrate knowledge of menu and banquet terms
- develop a menu and function plan to meet the needs of a client
- facilitate the food function and evaluate the success of the function plan
- demonstrate effort to improve basic competencies.

MODULE TOU205: **MEETINGS AND CONFERENCES**

Level: **Intermediate**

Theme: **Accommodation**

Prerequisite: **None**

Module Description: Students develop a meeting plan, facilitate and evaluate the success of the meeting plan, and investigate opportunities in meeting and convention planning.

Module Learner Expectations: *The student will:*

- explain the importance of the meeting and convention business
- develop an understanding of the process of meeting and convention planning
- develop a meeting plan, and facilitate and evaluate the success of the meeting
- investigate employment opportunities in convention planning
- demonstrate effort to improve basic competencies.

MODULE TOU206: **TOURISM DESTINATIONS I**

Level: **Intermediate**

Theme: **Travel**

Prerequisite: **None**

Module Description: Students demonstrate knowledge of world tourism geography by presenting travel information about North America and at least one other world region.

Module Learner Expectations: *The student will:*

- develop knowledge about the basic geographical features of the world
- develop specific knowledge of the physical geography, culture and economy of selected tourism destinations
- discuss travel patterns in the world and how they are influenced
- develop knowledge and awareness of the major attractions and regions of North America and practise communicating this information to others
- demonstrate effort to improve basic competencies.

MODULE TOU207: **TOURISM DESTINATIONS II**

Level: **Intermediate**

Theme: **Travel**

Prerequisite: **Tourism Destinations I (TOU206)**

Module Description: Students demonstrate knowledge of world tourism geography by presenting travel information about at least four major tourism regions of the world.

Module Learner Expectations: *The student will:*

- demonstrate a knowledge of the basic geographical features of the world
- develop specific knowledge of the physical geography, culture and economy of selected tourism destinations
- demonstrate basic research skills transferable to travel counselling activities
- communicate information about the major attractions and regions of the world in travel counsellor situations
- demonstrate effort to improve basic competencies.

MODULE TOU208: **TRAVEL PLANNING**

Level: **Intermediate**

Theme: **Travel**

Prerequisite: **None**

Module Description: Students create and evaluate an Alberta tour package and an international travel package including itinerary, tour and attractions information, and traveller information.

Module Learner Expectations:

The student will:

- identify the range of travel planning activities from day trips to escorted group tours
- understand how an itinerary is organized and what goes into one
- develop itineraries to meet the needs of various clients
- investigate employment opportunities in travel planning
- demonstrate effort to improve basic competencies.

MODULE TOU209: **TOURISM INTERPRETATION I**

Level: **Intermediate**

Theme: **Attractions**

Prerequisite: **None**

Module Description: Students evaluate the different types of interpretation media and demonstrate the basic skills of an information attendant by conducting an interpretation program for a tourism activity.

Module Learner Expectations:

The student will:

- define the term "interpretation" and describe opportunities for interpretation activities within the region
- develop an interpretation program for a tourism activity
- list different interpretive media and discuss the factors that influence media selection/use
- describe the duties of an information attendant and practise the basic skills of information duty
- demonstrate effort to improve basic competencies.

MODULE TOU210: **TOURISM INTERPRETATION II**

Level: **Intermediate**

Theme: **Attractions**

Prerequisite: **Tourism Interpretation I (TOU209)**

Module Description: Students create, implement and evaluate interpretation programs for both conducted and non-conducted activities, and demonstrate the skills of an effective leader in a conducted activity.

Module Learner Expectations: *The student will:*

- create an interpretation program for a conducted activity, and implement and evaluate the activity
- develop the basic skills of an interpretation leader
- create an interpretation program for a non-conducted activity, and implement and evaluate the activity
- demonstrate effort to improve basic competencies.

MODULE TOU303: **FOOD SERVICE OPERATIONS**

Level: **Advanced**

Theme: **Food**

Prerequisite: **None**

Module Description: Students relate trends and issues in food service to industry activity, design food service strategies and present a marketing or venture plan for a food service business.

Module Learner Expectations: *The student will:*

- discuss trends and issues in food service and relate these to industry activity
- research and analyze food service marketing strategies
- develop food service business strategies to satisfy customer expectations
- research and discuss various employment and business opportunities in food service
- demonstrate effort to refine basic competencies.

MODULE TOU304: **HOTEL/MOTEL OPERATIONS**

Level: **Advanced**

Theme: **Accommodation**

Prerequisite: **None**

Module Description: Students demonstrate correct check-in and check-out procedures, and research the organization of a large hotel, analyze marketing strategies and present a marketing plan for a hotel department.

Module Learner Expectations: *The student will:*

- discuss the organization of a major hotel and describe the role of key employees
- demonstrate correct check-in and check-out procedures commonly done by front desk staff
- investigate the variety of amenities and services that hotels offer to attract guests/clients
- describe a variety of functions handled by the sales department and develop a marketing plan for a hotel department
- demonstrate effort to refine basic competencies.

MODULE TOU305: **ALTERNATIVE ACCOMMODATIONS**

Level: **Advanced**

Theme: **Accommodation**

Prerequisite: **None**

Module Description: Students research and discuss issues related to alternative accommodations, develop a service strategy and standards, and present a venture or marketing plan for an alternative accommodation business.

Module Learner Expectations: *The student will:*

- investigate the types of alternative accommodations available in Alberta and their economic impact on the tourism industry
- consider development issues and develop operating policies service standards for a selected alternative accommodation
- develop a marketing or a venture plan for a selected alternative accommodation venture
- research and discuss employment and business opportunities in alternative accommodations
- demonstrate effort to refine basic competencies.

MODULE TOU306: **TRAVEL AGENCY OPERATIONS**

Level: **Advanced**

Theme: **Travel**

Prerequisite: **None**

Module Description: Students research the operation of a travel agency and the role and work activities of a travel agent, and present a marketing or venture plan for a travel agency.

Module Learner Expectations: *The student will:*

- describe the relationship between travel agency, client and supplier in the tourism industry
- list and describe services provided to clients by different types of travel agencies
- investigate and report on the role and work activities of travel agents
- research and discuss various employment and business opportunities in retail travel
- demonstrate effort to refine basic competencies.

MODULE TOU307: **AIRLINE RESERVATIONS**

Level: **Advanced**

Theme: **Travel**

Prerequisite: **None**

Module Description: In this module, the student processes travel reservations using a computer reservation system, develops an itinerary and provides the traveller with information related to the itinerary/destination.

Module Learner Expectations: *The student will:*

- understand and apply terms used in travel reservations
- describe the terms and requirements for international travel
- research different travel arrangements, process reservations and develop an itinerary
- provide the traveller with other important information related to the itinerary/destination
- demonstrate effort to refine basic competencies.

MODULE TOU308: **TOURISM AIR TRANSPORTATION**

Level: **Advanced**

Theme: **Travel**

Prerequisite: **None**

Module Description: Students research and report on the organization and operation of a major airline, and present a marketing plan for an airline.

Module Learner Expectations: *The student will:*

- describe the organization of the air transportation industry in Canada
- develop a marketing plan for an airline to attract and maintain business
- research and report on the operation of different departments in a major airline
- research and discuss employment and business opportunities in the air transportation industry
- demonstrate effort to refine basic competencies.

MODULE TOU309: **TOURISM SURFACE TRANSPORTATION**

Level: **Advanced**

Theme: **Travel**

Prerequisite: **None**

Module Description: Students research the business operations and career opportunities of rail, motor coach, auto and cruise industries, and present a variety of marketing strategies for a transportation industry.

Module Learner Expectations: *The student will:*

- describe the significant historical developments of the rail, motor coach, auto and cruise travel industries
- explain advantages and disadvantages of each mode of surface travel
- develop a variety of marketing strategies aimed at different travellers' needs, wants and expectations
- research and discuss various employment and business opportunities in the surface travel industries
- demonstrate effort to refine basic competencies.

MODULE TOU310: **ATTRACTIONS OPERATIONS**

Level: **Advanced**

Theme: **Attractions**

Prerequisite: **None**

Module Description: Students analyze the economic, social, cultural and environmental impact of attractions operations, and present a marketing or venture plan for an attractions development.

Module Learner Expectations: *The student will:*

- describe the components of an attractions development plan
- discuss and provide examples of the economic, social, cultural and environmental impacts of attractions development
- investigate and discuss issues in attractions operations
- research and discuss employment and business opportunities in attractions operations
- demonstrate effort to refine basic competencies.

MODULE TOU311: **ADVENTURE AND ECOTOURISM**

Level: **Advanced**

Theme: **Attractions**

Prerequisite: **None**

Module Description: Students analyze the economic, social and environmental factors that influence the development plan for an adventure or ecotourism venture, and compare management issues for different types of recreation areas.

Module Learner Expectations: *The student will:*

- describe the factors that influence decisions about recreation/ adventure development
- discuss the social and environmental impacts of adventure and ecotourism development
- research and discuss issues in adventure and ecotourism operations
- research and discuss employment and business opportunities in adventure and ecotourism
- demonstrate effort to refine basic competencies.

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WILDLIFE

STRAND RATIONALE

Wildlife is an important part of Canada's heritage. Canada is one of the few places in the world that still contains large natural ecosystems. The wildness of Canada contributes greatly to our quality of life and the functioning of the global ecosystem.

But the future of Canada's wildlife cannot be taken for granted. Wild populations and ecosystems are increasingly vulnerable to human population growth and technological development. Changes to ecosystems, brought about by phenomena such as global warming and the long-range transport of air pollutants, threaten both wildlife and people.

Recently, public concern for wildlife has expanded to embrace any living thing that is part of the natural ecosystem. Discussion of wildlife in this curriculum involves all wild organisms and their habitats—including wild plants, invertebrates and microorganisms, as well as fishes, amphibians, reptiles, and the birds and mammals traditionally regarded as wildlife★.

Wildlife, a strand in Career and Technology Studies, will provide opportunities for students to view themselves as part of the global ecosystem. Students will be encouraged to share opinions and beliefs regarding environmental issues and what should be done about them, and recognize the need to make personal choices that limit the demands placed on ecosystems to sustainable levels.

Within the philosophy of Career and Technology Studies, students in Wildlife will develop the knowledge, skills, attitudes, motivation and commitment to work individually and collectively, as private citizens and members of the work force, toward the conservation and responsible use of water, land, air, forests and wildlife. In order to achieve these competencies, *the student will*:

- develop greater awareness of the economic environmental and social significance of wildlife in Alberta and the rest of the world
- describe the characteristics of Alberta's wildlife, and identify trends in habitat and populations
- explain how technologies and research programs are designed to preserve biological diversity and foster the sustainable, ecologically sound management of species and ecosystems.

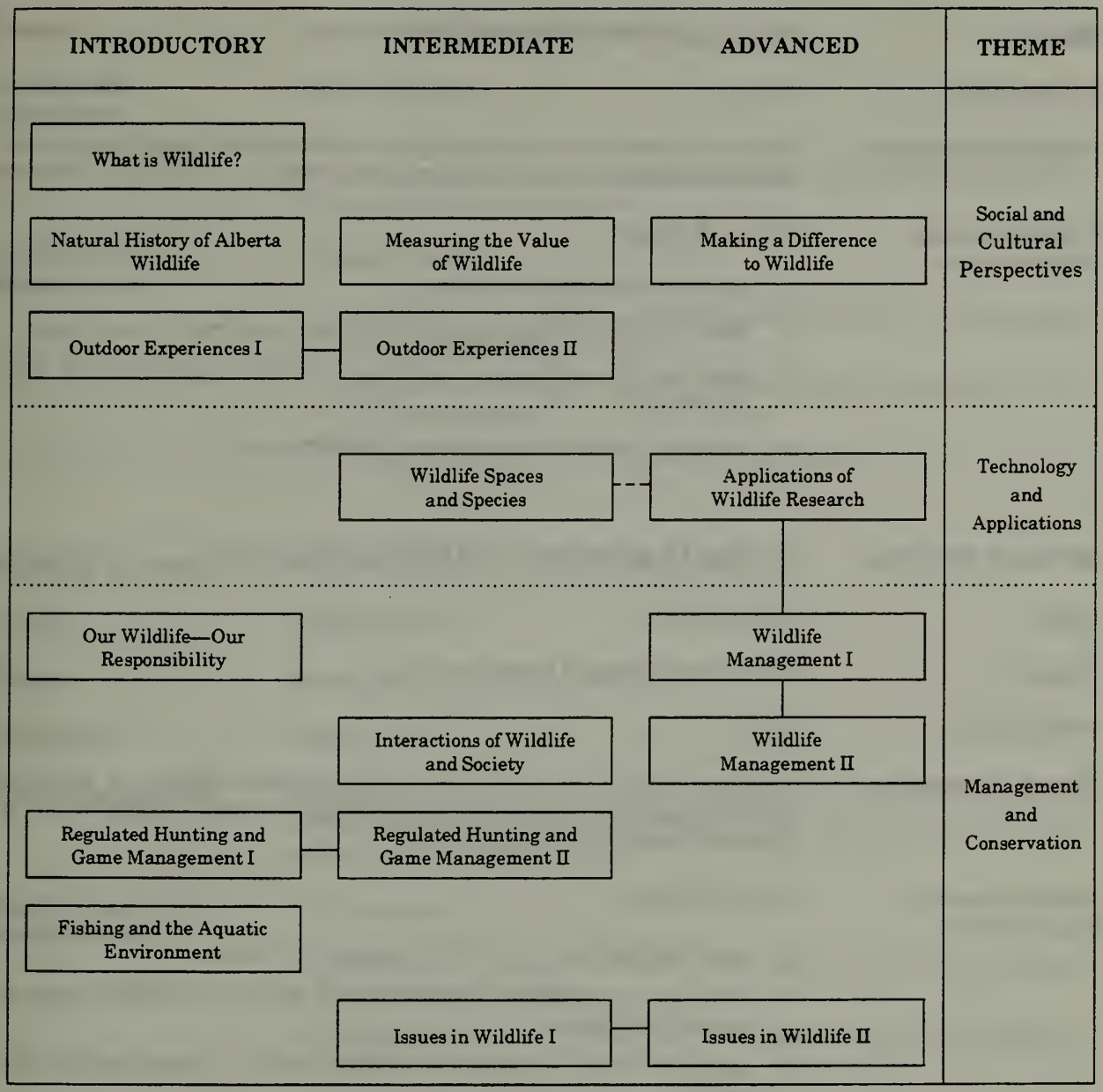
★ Wildlife Ministers' Council of Canada. *A Wildlife Policy for Canada.* Ottawa, ON: Environment Canada, 1990.

- translate development and conservation goals into viable plans for managing the consumptive and non-consumptive use of wildlife

- develop competencies and behaviours that have broad application to environmental career paths, and specific application to careers involving Alberta's wildlife.

Although students are at various stages of cognitive development, many will continue to use concrete operational thinking. Each module in Wildlife provides opportunities for students to link concrete and psychomotor learning experiences to more abstract thought processes and levels of thinking. Students will be encouraged to transfer the competencies they have developed in other core and complementary school courses as well as through hobbies, interests and past experiences. As students learn to relate theory and practice in participatory situations, confidence will further their ability to meet personal and professional challenges.

SCOPE AND SEQUENCE — WILDLIFE



—— Prerequisite - - - - Recommended prerequisite or corequisite

MODULE WLD101: **WHAT IS WILDLIFE?**

Level: **Introductory**

Theme: **Social and Cultural Perspectives**

Prerequisite: **None**

Module Description: Students demonstrate knowledge of wildlife and ecosystems, and examine the need to manage and conserve wildlife.

Module Learner Expectations:

The student will:

- provide a definition for wildlife
- describe interrelationships among wildlife and dynamic ecosystems
- explain the difference between wildlife conservation and preservation
- demonstrate effort to develop basic competencies.

MODULE WLD102: **NATURAL HISTORY OF ALBERTA WILDLIFE**

Level: **Introductory**

Theme: **Social and Cultural Perspectives**

Prerequisite: **None**

Module Description: Students investigate the diversity of Canadian wildlife in terms of structure, behaviour and habitat, and compare Alberta wildlife with that present in other parts of the world.

Module Learner Expectations:

The student will:

- describe the diversity of wildlife present in Canada
- research the structure, behaviour and habitat of wildlife species present in Alberta
- compare Alberta's wildlife with that present in other parts of the world
- demonstrate effort to develop basic competencies.

MODULE WLD103: OUTDOOR EXPERIENCES I

Level: Introductory

Theme: Social and Cultural Perspectives

Prerequisite/ Corequisite: Basic First Aid

Module Description: Students demonstrate basic skills required for responsible participation in a range of outdoor activities.

Module Learner Expectations:

The student will:

- demonstrate knowledge and performance necessary for responsible outdoor experiences
- participate in a range of outdoor activities that have minimal impact on the environment
- demonstrate effort to develop basic competencies.

MODULE WLD105: OUR WILDLIFE—OUR RESPONSIBILITY

Level: Introductory

Theme: Management and Conservation

Prerequisite: None

Module Description: Students explain the significance of wildlife in society, examine relationships among humans and wildlife, and research potential career paths in wildlife-related fields.

Module Learner Expectations:

The student will:

- describe the social, cultural, economic and environmental significance of wildlife
- explain how personal needs, wants, beliefs and actions may influence wildlife
- research potential career paths in wildlife
- demonstrate effort to develop basic competencies.

MODULE WLD107: **REGULATED HUNTING AND GAME MANAGEMENT I**

Level: **Introductory**

Theme: **Management and Conservation**

Prerequisite: **None**

Module Parameters: **Access to an outdoor wilderness environment and relevant government agencies; teacher must be a registered Alberta Conservation and Hunter Education Program Instructor (Government of Alberta, Department of Environmental Protection); instruction on first-aid techniques to be provided by person(s) having personal certification in Standard First Aid (St. John Ambulance).**

Alberta Conservation and Hunter Education Program Student Certificates may be awarded to students who successfully complete Regulated Hunting and Game Management I and II.

Information regarding student safety and instructor certification/ registration is provided in Sections C and H of the Guide to Standards and Implementation.

Module Description: Students explain the role of regulated hunting in game management, identify Alberta's game animals and demonstrate knowledge and skills that enable safe and comfortable experiences in the outdoors.

Module Learner Expectations: *The student will:*

- explain game management practices and the role of regulated hunting in game management
- identify the distinguishing characteristics of Alberta's ungulates, carnivores, upland birds and waterfowl
- describe basic equipment and techniques for safe and comfortable experiences in the outdoors
- demonstrate effort to develop basic competencies.

MODULE WLD108: **FISHING AND THE AQUATIC ENVIRONMENT**

Level: **Introductory**

Theme: **Management and Conservation**

Prerequisite: **None**

Module Description: Students explain the role of recreational fishing in the management and conservation of fish resources, and demonstrate knowledge of responsible practices while fishing or during related outdoor activities.

Module Learner Expectations:

The student will:

- explain the role of recreational fishing in the management of fish resources, and social and legal standards of conduct for game fishing
- identify biological aspects of fishing and the distinguishing characteristics and habits of Alberta's game fish
- describe basic equipment and safe practices for fishing
- demonstrate effort to develop basic competencies.

MODULE WLD202: MEASURING THE VALUE OF WILDLIFE

Level: **Intermediate**

Theme: **Social and Cultural Perspectives**

Prerequisite: **None**

Module Description: Students assess the significance of wildlife in society, analyze relationships among humans and wildlife, and research career opportunities in wildlife related fields.

Module Learner Expectations:

The student will:

- assess the cultural, social, environmental and economic significance of wildlife
- assess the impact of personal needs, wants, beliefs and actions on wildlife and habitat
- research current and future career opportunities in wildlife related fields
- demonstrate effort to improve basic competencies.

MODULE WLD203: OUTDOOR EXPERIENCES II

Level: **Intermediate**

Theme: **Social and Cultural Perspectives**

Prerequisite: **Basic First Aid, Outdoor Experiences I (WLD103)**

Module Description: Students plan, prepare for and conduct an extended outdoor wilderness trip.

Module Learner Expectations:

The student will:

- plan and prepare for an extended outdoor wilderness trip
- safely conduct and conclude an extended outdoor wilderness trip with minimal environmental impact
- demonstrate effort to improve basic competencies.

MODULE WLD204: **WILDLIFE SPACES AND SPECIES**

Level: **Intermediate**

Theme: **Technology and Applications**

Prerequisite: **None**

Module Description: Students present the results of research on wildlife spaces and species in Alberta and other parts of the world, and compare different strategies used in wildlife management.

Module Learner Expectations: *The student will:*

- research representative wildlife spaces and species in Alberta and other parts of the world
- identify and describe wildlife spaces and species in Alberta and Canada that have become threatened or endangered
- compare local and global strategies for wildlife protection and habit management
- demonstrate effort to improve basic competencies.

MODULE WLD206: **INTERACTIONS OF WILDLIFE AND SOCIETY**

Level: **Intermediate**

Theme: **Management and Conservation**

Prerequisite: **None**

Module Description: Students explain how human population growth and land use practices affect wildlife, and describe strategies used to manage interactions between wildlife and society.

Module Learner Expectations: *The student will:*

- describe the effects of human populations on wildlife
- describe the effect of land use practices on wildlife
- explain strategies for managing interactions between wildlife and society
- demonstrate effort to improve basic competencies.

MODULE WLD207: **REGULATED HUNTING AND GAME MANAGEMENT II**

Level: **Intermediate**

Theme: **Management and Conservation**

Prerequisite: **Regulated Hunting and Game Management I (WLD107)**

Module Parameters: **Access to an outdoor wilderness environment and relevant government agencies; teacher must be a registered Alberta Conservation and Hunter Education Program Instructor (Government of Alberta, Department of Environmental Protection); instruction on firearm handling and safety to be provided by person(s) having certification (instructor level) in the Canadian Firearms Safety Course (Government of Alberta, Department of Justice).**

Alberta Conservation and Hunter Education Program Student Certificates may be awarded to students who successfully complete Regulated Hunting and Game Management I and II.

Information regarding student safety and instructor certification/ registration is provided in Sections C and H of the Guide to Standards and Implementation.

A school board motion and parental consent is required.

Module Description: Students demonstrate knowledge of safe hunting practices and explain legal responsibilities of the hunter.

Module Learner Expectations: *The student will:*

- demonstrate knowledge of the safe use of bows, arrows and firearms
- describe techniques for targeting, handling and dressing game animals in the field
- explain personal and legal responsibilities of the hunter
- demonstrate effort to improve basic competencies.

MODULE WLD209: **ISSUES IN WILDLIFE I**

Level: **Intermediate**

Theme: **Management and Conservation**

Prerequisite: **None**

Module Description: Students examine a range of issues in wildlife, and presents the results of research on one or more issues concerning wildlife in Canada.

Module Learner Expectations: *The student will:*

- identify a range of issues in wildlife
- conduct research on one or more wildlife issues in Canada
- demonstrate effort to improve basic competencies.

MODULE WLD302: **MAKING A DIFFERENCE TO WILDLIFE**

Level: **Advanced**

Theme: **Social and Cultural Perspectives**

Prerequisite: **None**

Module Description: Students explain how human population and wildlife affect each other, compare different strategies for managing interactions among humans and wildlife, and demonstrate individual and shared actions that foster environmental stewardship.

Module Learner Expectations:

The student will:

- describe ways in which human populations and wildlife affect each other
- assess strategies used to manage wildlife spaces and species
- demonstrate commitment to environmental stewardship through individual and shared actions
- demonstrate effort to refine basic competencies.

MODULE WLD304: **APPLICATIONS OF WILDLIFE RESEARCH**

Level: **Advanced**

Theme: **Technology and Applications**

Prerequisite/ corequisite: **Wildlife Spaces and Species (WLD204; recommended)**

Module Description: Students explain applications of the research process in wildlife, and conduct experimental research on a wildlife space or species.

Module Learner Expectations:

The student will:

- identify components of the research process and describe its application to wildlife
- conduct experimental research on a wildlife space or species
- demonstrate effort to refine basic competencies.

MODULE WLD305: **WILDLIFE MANAGEMENT I**

Level: **Advanced**

Theme: **Management and Conservation**

Prerequisite: **Applications of Wildlife Research (WLD304)**

Module Description: Students describe the functions and processes of wildlife management, and identify issues that may affect the development of a wildlife management plan.

Module Learner Expectations: *The student will:*

- describe the functions of wildlife management
- identify and explain steps involved in developing a wildlife management plan
- analyze issues and problems affecting the management of wildlife spaces and species
- demonstrate effort to refine basic competencies.

MODULE WLD306: **WILDLIFE MANAGEMENT II**

Level: **Advanced**

Theme: **Management and Conservation**

Prerequisite: **Wildlife Management I (WLD305)**

Module Description: Students develop and present a plan for managing a wildlife space or species.

Module Learner Expectations: *The student will:*

- explain the basic principles of wildlife management
- develop a wildlife management plan
- demonstrate effort to refine basic competencies.

MODULE WLD309:	**ISSUES IN WILDLIFE II**
Level:	**Advanced**
Theme:	**Management and Conservation**
Prerequisite:	**Issues in Wildlife I (WLD209)**
Module Description:	Students examine the complexity of wildlife issues in Alberta and the rest of the world, and demonstrate individual and shared actions that foster wildlife conservation and management.
Module Learner Expectations:	*The student will:* • analyze social, economic and environmental perspectives associated with current wildlife issues • explain how problems, issues and trends involving wildlife in Canada may be similar to those in other parts of the world • plan and implement a responsible course of action for wildlife conservation and management • demonstrate effort to refine basic competencies.

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